



dr. van haeringen **laboratorium b.v.**

a **VHLGenetics** company

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Through: LABOCOR, S.L.  
Alamillo 41 41  
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## Analysis Certificate

### Animal data

Name: CEBE DE DESATEJOS  
Date of birth: 27.10.2015  
Sex: Male  
Chip number: 941000018591600  
Breed: Unknown

### Sample data

VHL\_ID: H429414  
Test ID-nr: 458776 1  
Material: Swab

### H421 - Hiplaxity 2 - Date of test: 01.02.2021

Testresult: N/HL

### H423 - SCID JTR - Date of test: 01.02.2021

Testresult: NORMAL

### H724 - L2-HGA - Date of test: 01.02.2021

Testresult: NORMAL

### H804 - Cerebellar Ataxia / NCL-A - Date of test: 01.02.2021

Testresult: NORMAL

### H811 - Hyperuricemia (HUU) - Date of test: 01.02.2021

Testresult: NORMAL

### H849 - PLL - Date of test: 01.02.2021

Testresult: NORMAL

### H919 - Hiplaxity 1 - Date of test: 01.02.2021

Testresult: N/HL

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**H485 - Congenital Hypothyroidism (CHG) 2 - Date of test: 01.02.2021**

Testresult: NORMAL

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**H488 - Congenital Hypothyroidism (CHG)3 - Date of test: 01.02.2021**

Testresult: NORMAL

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**H492 - Hyperkeratosis, palmoplantar - Date of test: 01.02.2021**

Testresult: NORMAL

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**H509 - Polycystic kidney disease (PKD1) - Date of test: 01.02.2021**

Testresult: NORMAL

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**H360 - Gallbladder Mucocele - Date of test: 01.02.2021**

Testresult: NORMAL

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**H363 - Hyperkeratosis, epidermolytic - Date of test: 01.02.2021**

Testresult: NORMAL

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**H357 - Cone Rod Dystrophy 1 (crd1) - Date of test: 01.02.2021**

Testresult: NORMAL

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**H358 - Cone Rod Dystrophy 2 (crd2) - Date of test: 01.02.2021**

Testresult: NORMAL

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**H699 - Hereditary Cataract 2 (HC) -HSF4 - Date of test: 01.02.2021**

Testresult: NORMAL

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**H744 - vWD Type III - Date of test: 01.02.2021**

Testresult: NORMAL

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**H303 - Spinocerebellar ataxia - Date of test: 01.02.2021**

Testresult: NORMAL

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**H312 - Craniomandibular Osteopathy (CMO) - Date of test: 01.02.2021**

Testresult: NORMAL

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**H324 - FBN2 - Date of test: 01.02.2021**

Testresult: N/HL

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**H677 - Von-Willebrands Disease Type 1 - Date of test: 01.02.2021**

Testresult: NORMAL

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D. Mioch, MSc Veterinary Medicine  
CEO

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#### H421 - Hiplaxity 2

The disease is of multifactorial origin, which means that the symptoms are a combination of genetic factors as well as the environment.

This marker is part of a panel of genetic factors influencing hip laxity. For each genetic factor of a multifactorial disease, the desirable genetic variant is indicated as 'N/N'. Animals carrying one copy of the undesirable genetic variant are indicated as 'N/HL', whereas animals carrying two copies of the undesirable genetic variant are indicated as 'HL/HL'.

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#### H423 - SCID JTR

Explanation about the result:

**NORMAL:** The animal is free and has two healthy alleles. When used in breeding, this animal will not become ill due to the disease. It cannot spread the disease in the population.

**CARRIER:** The animal is carrier and has one healthy and one mutant (disease) allele. When used in breeding, 50 percent of the offspring will receive the disease allele. Carriers will not become ill.

**AFFECTED:** The animal is affected and has two mutant (disease) alleles. When used in breeding, all offspring will receive the mutant allele from this animal. Affected animals will become ill.

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#### H724 - L2-HGA

Explanation about the result:

**NORMAL:** The animal is free and has two healthy alleles. When used in breeding, this animal will not become ill due to the disease. It cannot spread the disease in the population.

**CARRIER:** The animal is carrier and has one healthy and one mutant (disease) allele. When used in breeding, 50 percent of the offspring will receive the disease allele. Carriers will not become ill.

**AFFECTED:** The animal is affected and has two mutant (disease) alleles. When used in breeding, all offspring will receive the mutant allele from this animal. Affected animals will become ill.

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#### H804 - Cerebellar Ataxia / NCL-A

Explanation about the result:

**NORMAL:** The animal is free and has two healthy alleles. When used in breeding, this animal will not become ill due to the disease. It cannot spread the disease in the population.

**CARRIER:** The animal is carrier and has one healthy and one mutant (disease) allele. When used in breeding, 50 percent of the offspring will receive the disease allele. Carriers will not become ill.

**AFFECTED:** The animal is affected and has two mutant (disease) alleles. When used in breeding, all offspring will receive the mutant allele from this animal. Affected animals will become ill.

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#### H811 - Hyperuricemia (HUU)

Explanation about the result:

**NORMAL:** The animal is free and has two healthy alleles. When used in breeding, this animal will not become ill due to the disease. It cannot spread the disease in the population.

**CARRIER:** The animal is carrier and has one healthy and one mutant (disease) allele. When used in breeding, 50 percent of the offspring will receive the disease allele. Carriers will not become ill.

**AFFECTED:** The animal is affected and has two mutant (disease) alleles. When used in breeding, all offspring will receive the mutant allele from this animal. Affected animals will become ill.

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#### H849 - PLL

Explanation about the result:

**NORMAL:** The animal is free and has two healthy alleles. When used in breeding, this animal will not become ill

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due to the disease. It cannot spread the disease in the population.

**CARRIER:** The animal is carrier and has one healthy and one mutant (disease) allele. When used in breeding, 50 percent of the offspring will receive the disease allele. Carriers will not become ill.

**AFFECTED:** The animal is affected and has two mutant (disease) alleles. When used in breeding, all offspring will receive the mutant allele from this animal. Affected animals will become ill.

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#### **H919 - Hiplaxity 1**

The disease is of multifactorial origin, which means that the symptoms are a combination of genetic factors as well as the environment.

This marker is part of a panel of genetic factors influencing hip laxity. For each genetic factor of a multifactorial disease, the desirable genetic variant is indicated as 'N/N'. Animals carrying one copy of the undesirable genetic variant are indicated as 'N/HL', whereas animals carrying two copies of the undesirable genetic variant are indicated as 'HL/HL'.

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#### **H485 - Congenital Hypothyroidism (CHG) 2**

Explanation about the result:

**NORMAL:** The animal is free and has two healthy alleles. When used in breeding, this animal will not become ill due to the disease. It cannot spread the disease in the population.

**CARRIER:** The animal is carrier and has one healthy and one mutant (disease) allele. When used in breeding, 50 percent of the offspring will receive the disease allele. Carriers will not become ill.

**AFFECTED:** The animal is affected and has two mutant (disease) alleles. When used in breeding, all offspring will receive the mutant allele from this animal. Affected animals will become ill.

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#### **H488 - Congenital Hypothyroidism (CHG)3**

Explanation about the result:

**NORMAL:** The animal is free and has two healthy alleles. When used in breeding, this animal will not become ill due to the disease. It cannot spread the disease in the population.

**CARRIER:** The animal is carrier and has one healthy and one mutant (disease) allele. When used in breeding, 50 percent of the offspring will receive the disease allele. Carriers will not become ill.

**AFFECTED:** The animal is affected and has two mutant (disease) alleles. When used in breeding, all offspring will receive the mutant allele from this animal. Affected animals will become ill.

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#### **H492 - Hyperkeratosis, palmoplantar**

Explanation about the result:

**NORMAL:** The animal is free and has two healthy alleles. When used in breeding, this animal will not become ill due to the disease. It cannot spread the disease in the population.

**CARRIER:** The animal is carrier and has one healthy and one mutant (disease) allele. When used in breeding, 50 percent of the offspring will receive the disease allele. Carriers will not become ill.

**AFFECTED:** The animal is affected and has two mutant (disease) alleles. When used in breeding, all offspring will receive the mutant allele from this animal. Affected animals will become ill.

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#### **H509 - Polycystic kidney disease (PKD1)**

Explanation about the result:

**NORMAL:** The animal is free and has two healthy alleles. When used in breeding, this animal will not become ill due to the disease. It cannot spread the disease in the population.

**CARRIER:** The animal is carrier and has one healthy and one mutant (disease) allele. When used in breeding, 50 percent of the offspring will receive the disease allele. Carriers will also become ill.

**AFFECTED:** The animal is affected and has two mutant (disease) alleles. When used in breeding, all offspring

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will receive the mutant allele from this animal. Affected animals will become ill.

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### H360 - Gallbladder Mucocele

Explanation about the result:

**NORMAL:** The animal is free and has two healthy alleles. When used in breeding, this animal will not become ill due to the disease. It cannot spread the disease in the population.

**CARRIER:** The animal is carrier and has one healthy and one mutant (disease) allele. When used in breeding, 50 percent of the offspring will receive the disease allele. Carriers will also become ill.

**AFFECTED:** The animal is affected and has two mutant (disease) alleles. When used in breeding, all offspring will receive the mutant allele from this animal. Affected animals will become ill.

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### H363 - Hyperkeratosis, epidermolytic

Explanation about the result:

**NORMAL:** The animal is free and has two healthy alleles. When used in breeding, this animal will not become ill due to the disease. It cannot spread the disease in the population.

**CARRIER:** The animal is carrier and has one healthy and one mutant (disease) allele. When used in breeding, 50 percent of the offspring will receive the disease allele. Carriers will not become ill.

**AFFECTED:** The animal is affected and has two mutant (disease) alleles. When used in breeding, all offspring will receive the mutant allele from this animal. Affected animals will become ill.

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### H357 - Cone Rod Dystrophy 1 (crd1)

Explanation about the result:

**NORMAL:** The animal is free and has two healthy alleles. When used in breeding, this animal will not become ill due to the disease. It cannot spread the disease in the population.

**CARRIER:** The animal is carrier and has one healthy and one mutant (disease) allele. When used in breeding, 50 percent of the offspring will receive the disease allele. Carriers will not become ill.

**AFFECTED:** The animal is affected and has two mutant (disease) alleles. When used in breeding, all offspring will receive the mutant allele from this animal. Affected animals will become ill.

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### H358 - Cone Rod Dystrophy 2 (crd2)

Explanation about the result:

**NORMAL:** The animal is free and has two healthy alleles. When used in breeding, this animal will not become ill due to the disease. It cannot spread the disease in the population.

**CARRIER:** The animal is carrier and has one healthy and one mutant (disease) allele. When used in breeding, 50 percent of the offspring will receive the disease allele. Carriers will not become ill.

**AFFECTED:** The animal is affected and has two mutant (disease) alleles. When used in breeding, all offspring will receive the mutant allele from this animal. Affected animals will become ill.

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### H699 - Hereditary Cataract 2 (HC) -HSF4

Explanation about the result:

**NORMAL:** The animal is free and has two healthy alleles. When used in breeding, this animal will not become ill due to the disease. It cannot spread the disease in the population.

**CARRIER:** The animal is carrier and has one healthy and one mutant (disease) allele. When used in breeding, 50 percent of the offspring will receive the disease allele. Carriers will not become ill.

**AFFECTED:** The animal is affected and has two mutant (disease) alleles. When used in breeding, all offspring will receive the mutant allele from this animal. Affected animals will become ill.

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### H744 - vWD Type III

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Explanation about the result:

**NORMAL:** The animal is free and has two healthy alleles. When used in breeding, this animal will not become ill due to the disease. It cannot spread the disease in the population.

**CARRIER:** The animal is carrier and has one healthy and one mutant (disease) allele. When used in breeding, 50 percent of the offspring will receive the disease allele. Carriers will not become ill.

**AFFECTED:** The animal is affected and has two mutant (disease) alleles. When used in breeding, all offspring will receive the mutant allele from this animal. Affected animals will become ill.

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### H303 - Spinocerebellar ataxia

Explanation about the result:

**NORMAL:** The animal is free and has two healthy alleles. When used in breeding, this animal will not become ill due to the disease. It cannot spread the disease in the population.

**CARRIER:** The animal is carrier and has one healthy and one mutant (disease) allele. When used in breeding, 50 percent of the offspring will receive the disease allele. Carriers will not become ill.

**AFFECTED:** The animal is affected and has two mutant (disease) alleles. When used in breeding, all offspring will receive the mutant allele from this animal. Affected animals will become ill.

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### H312 - Craniomandibular Osteopathy (CMO)

Explanation about the result:

**NORMAL:** The animal is free and has two healthy alleles. When used in breeding, this animal will not become ill due to the disease. It cannot spread the disease in the population.

**CARRIER:** The animal is carrier and has one healthy and one mutant (disease) allele. When used in breeding, 50 percent of the offspring will receive the disease allele. Carriers will also become ill.

**AFFECTED:** The animal is affected and has two mutant (disease) alleles. When used in breeding, all offspring will receive the mutant allele from this animal. Affected animals will become ill.

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### H324 - FBN2

The disease is of multifactorial origin, which means that the symptoms are a combination of genetic factors as well as the environment.

This marker is part of a panel of genetic factors influencing hip laxity. For each genetic factor of a multifactorial disease, the desirable genetic variant is indicated as 'N/N'. Animals carrying one copy of the undesirable genetic variant are indicated as 'N/HL', whereas animals carrying two copies of the undesirable genetic variant are indicated as 'HL/HL'.

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### H677 - Von-Willebrands Disease Type 1

Explanation about the result:

**NORMAL:** The animal is free and has two healthy alleles. When used in breeding, this animal will not become ill due to the disease. It cannot spread the disease in the population.

**CARRIER:** The animal is carrier and has one healthy and one mutant (disease) allele. When used in breeding, 50 percent of the offspring will receive the disease allele. Carriers will also become ill.

**AFFECTED:** The animal is affected and has two mutant (disease) alleles. When used in breeding, all offspring will receive the mutant allele from this animal. Affected animals will become ill.

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