

## Dog Information

**Contessa Penelope of Joyful (Penelope)** Female  
**NAME** **SEX**  
**Golden Retriever** April 2nd, 2021  
**BREED ANCESTRY** **DATE OF BIRTH**  
**American Kennel Club (AKC) SS26206909** n/a  
**REGISTRATION** **MICROCHIP**

**Joy Martin**  
**OWNER NAME**

**Canine Genetic Health Screen**  
**TEST**

**June 12th, 2022**  
**TEST DATE**

## BREED HEALTH TESTS

| DISEASE   | GENE                   | GENOTYPE | RESULT | TESTING RECOMMENDED BY |
|---|------------------------|----------|--------|------------------------|
| Degenerative Myelopathy, DM                             | SOD1(A)                | GG       | Clear  |                        |
| Golden Retriever Progressive Retinal Atrophy 1, GR-PRA1 | SLC4A3 Exon 16         | NN       | Clear  |                        |
| Golden Retriever Progressive Retinal Atrophy 2, GR-PRA2 | TTC8 Exon 8            | NN       | Clear  |                        |
| Ichthyosis, ICH1  | PNPLA1 (Exon 8)        | AAC/AAC  | Clear  |                        |
| Muscular Dystrophy                                      | DMD                    | AA       | Clear  |                        |
| Progressive Retinal Atrophy, prcd                       | PRCD Exon 1            | GG       | Clear  |                        |
| Congenital Myasthenic Syndrome, CMS                     | COLQ                   | GG       | Clear  |                        |
| Dystrophic Epidermolysis Bullosa                        | COL7A1 (Exon 68)       | GG       | Clear  |                        |
| Neuronal Ceroid Lipofuscinosis 5, NCL 5                 | CLN5 (Exon 4 Deletion) | NN       | Clear  |                        |
| Osteogenesis Imperfecta, Brittle Bone Disease           | COL1A1 (Exon 18)       | GG       | Clear  |                        |

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## INBREEDING AND DIVERSITY

| Genetic Diversity                | RESULT | GENETIC RESULT |
|----------------------------------|--------|----------------|
| Coefficient Of Inbreeding        |        | 29%            |
| MHC Class II - DLA DRB1          |        | High Diversity |
| MHC Class II - DLA DQA1 and DQB1 |        | High Diversity |

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## TRAIT TESTS (1/2)

| Coat Color                  | RESULT   | GENETIC RESULT                |
|-----------------------------|--|-------------------------------|
| E Locus (MC1R)              | No dark hairs anywhere                                   | ee                            |
| K Locus (CBD103)            | Not expressed  | K <sup>B</sup> k <sup>γ</sup> |
| Intensity Loci LINKAGE      | Any pigmented hair likely white or cream                 | Dilute Red Pigmentation       |
| A Locus (ASIP)              | Not expressed  | a <sup>t</sup> a <sup>t</sup> |
| D Locus (MLPH)              | Not expressed  | DD                            |
| Cocoa (HPS3)                | No co alleles, not expressed                             | NN                            |
| B Locus (TYRP1)             | Likely black colored nose/feet                           | BB                            |
| Saddle Tan (RALY)           | Not expressed  | NI                            |
| S Locus (MITF)              | Likely to have little to no white in coat                | SS                            |
| M Locus (PMEL)              | No merle alleles   | mm                            |
| R Locus (USH2A) LINKAGE     | Likely no impact on coat pattern                         | rr                            |
| H Locus (Harlequin)         | No harlequin alleles                                     | hh                            |
| Other Coat Traits           | RESULT   | GENETIC RESULT                |
| Furnishings (RSPO2) LINKAGE | Likely unfurnished (no mustache, beard, and/or eyebrows) | II                            |
| Coat Length (FGF5)          | Likely long coat   | TT                            |

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## TRAIT TESTS (2/2)

| Body Size               | RESULT  | GENETIC RESULT |
|-------------------------|---------|----------------|
| Body Size (IGF1)        | Larger  | NN             |
| Body Size (IGFR1)       | Larger  | GG             |
| Body Size (STC2)        | Larger  | TT             |
| Body Size (GHR - E191K) | Smaller | AA             |
| Body Size (GHR - P177L) | Larger  | CC             |

  

| Performance                 | RESULT                    | GENETIC RESULT |
|-----------------------------|---------------------------|----------------|
| Altitude Adaptation (EPAS1) | Normal altitude tolerance | GG             |
| Appetite (POMC) LINKAGE     | Normal food motivation    | NN             |