

OVERVIEW OF OUR ANALYSES

...providing first-class genetic services

Our research is targeted to provide information about genetic phenomena and genes that we consider are most relevant to racehorse performance, those with practical value to horse people. Our resulting products and services have application to the [breeding](#), [sales](#), [training](#) and [racing](#) of thoroughbreds:

- **Mare breeding recommendations by DNA analysis**
- **Mare breeding recommendations by genetic database only (without DNA analyses)**
- **Evaluation of sales propositions (including potential breeding and racing stock)**
- **Evaluation of racing/training potential and stamina leanings**
- **Stallion breeding programmes**
- **Priority Services Contracts (PSCs) for larger organisations**
- **DNA storage – a living pedigree**
- **Private and bespoke genetic projects**

****The specific services offered and price tariffs are provided on a separate information sheet****

The Genetic Toolbox – tests and assessments supporting our services

GhP Score[®]: Scientific evidence shows us that the level to which a thoroughbred is inbred has an effect on its genetic health and on its ability to 'stamp' its progeny. Since this information cannot be assessed accurately by 'paper-based' pedigree, our response was to develop the **GhP Score[®]** analysis. From a blood sample, we can determine the true extent of this crucial factor, by providing a score for your thoroughbred. It gives a clearer indication of how strongly your mare or stallion is likely to stamp a foal, how genetically healthy a potential foal is likely to be and the likelihood that a particular mating will result in the 'fixation' of [useful](#) genes. Used in conjunction with our genetic calculations, **GhP Score[®]** helps you make more informed mating decisions. **Result:** Improved management of the genetic potential of your breeding stock and a more directed and successful outcome.

NEW mPOWER[®]: From our newest, scientifically-published and patented research we have identified eight genes that act as performance indicators. By applying the **mPOWER[®]** DNA analysis, we can confirm the exact variants of these genes carried by a horse. Crucially, we can use this information, in conjunction with our **1stBlood[®]** database, to determine the likely [speed](#), [stamina](#) and [distance optimum](#) of a horse. **Result:** A far clearer indication of a thoroughbred's ideal racing or breeding direction.

NEW 1stBlood[®]: Our unique, international genetics database is derived from our most recent research. In racing, we can assign a genetic score to [all](#) horses and estimate their stamina limitations. Furthermore, we can indicate their probable performance over set distances, at different ages and even in a broad range of international races. **Result:** Train your horse for the correct distance and races right from the start. With respect to breeding, the **1stBlood[®]** database can significantly enhance stallion-mare matching. We are even able to correct for studbook data recording errors, which dictate that current pedigree information is inaccurate. **Result:** A greatly improved chance of breeding a horse with co-ordinated genetic components and probability of success.

Other information used:

Common genetic analyses: There are numerous non-specific laboratory methods in a geneticist's toolbox, which have application across a range of animal species. Much of the research applied to other animals and humans can be readily adapted for use with horses. We can quickly modify a broad range of techniques, particularly in carrying out private project work for specific clients.

Tests under development: Our R&D team is continually seeking to expand our range of tests. We learn much from the research carried out during their development. At present, we have two prototype analyses that are in private and restricted use. These are designed to identify genetic variants of two muscle enzymes, which influence athletic performance. These will become more widely available at a later date.

Supplementary information: Genetic analyses of horses can help reinforce information derived from 'paper-based' data. We also use supporting information such as: broader genetic considerations and phenomena; pedigree correlations; family breeding and performance history; commerciality aspects; sire line trends; sex-biases.

