



Two dogs have their day

The National Human Genome Research Institute (NHGRI) recently announced that sequencing of the dog genome was to begin shortly and that they had selected their dog. From 120 dogs representing 60 breeds, the winner is Tasha, a female Boxer. The extended process of selecting the proper pooch was designed to find a bitch with low heterozygosity rather than the one who will best represent NHGRI at Westminster. While it is unlikely that the actual breed will make much of a difference, the lucky pooch will go down in history as, well, the dog whose genome was sequenced. The project will include 7X coverage of Tasha's genome and a sampling from 10-20 other breeds to the tune of \$50 million. Meanwhile, TIGR and Celera joined forces once again and have already produced 1.5X coverage of a male Standard Poodle named Shadow who happens to be the eldest pet of proud owners Claire Fraser and Craig Venter. The team currently has no plans to go for more thorough coverage, but expects to be able to glean valuable information from the shallow coverage. We would like to call for a snappy rendition of 'Me and My Shadow' at the press conference. MS



Going to school on chocolate

Lovers of chocolate have many ways to learn more about their favorite food these days. The American Museum of Natural History in New York kicked off its *Chocolate* exhibition last month, which explores the "enduring allure of this delectable phenomenon." Hard-core cocoa-philosophers could have spent 11 days in June at the Yachana Eco-Lodge in the heart of the Ecuadorian Amazon for echocolate.com's second annual 'University of Chocolate.' The UC is the training program of the Center of International Cooperation for Development-Oriented Agronomical Research, where interested parties are tutored in the genetics, biochemistry, agronomics and economics of the cocoa tree. Cacao (*Theobroma cacao*, the source of cocoa) is one of the world's oldest cultivated plants, and also (you won't be surprised to learn) a multibillion-dollar industry. All of this chocolate news prompted us to take a look at the state of cacao genetics, which seems to be thriving. Marker-assisted breeding programs, QTL analysis, linkage mapping, microarray analysis and gene sequencing are all proceeding apace with the aim of breeding disease- and pest-resistant cocoa. To avoid a possible fungus-induced chocolate shortfall, M&M Mars, Inc. apparently signed a research and development agreement with the USDA a few years ago to carry out such a breeding program. AP

TouchingBase written by Laura Bonetta, Alan Packer and Michael Stebbins.

What's that gene...?

The latest offering from the National Library of Medicine is aimed at arming the consumer with a basic knowledge of genetic diseases. Anyone with a question about a specific disease or gene can now search the 'Genetic Home Reference' at <http://ghr.nlm.nih.gov>. For example, type in 'cystic fibrosis' and you will be taken to a page with a short description of the disease, its prevalence, what the symptoms are, how the disease is inherited, how it is diagnosed, what treatments are available, and where to get more information. Type in the name of a gene and you will get information about the gene's chromosomal location, how the normal gene product functions, and a list of conditions caused by mutations in the gene. The information is clearly presented in an easy-to-digest question-and-answer format targeted at individuals with high-school level science. At the moment the site only offers summaries of 74 conditions (all caused by mutations in single genes) and 58 genes, but it looks as though it will be updated frequently. One feature that needs improvement is the list of external resources to which the site links. For example, for diseases like cystic fibrosis and Alzheimer, the only link to other sources of information is to the Genetic and Rare Diseases Information Center. The site also offers a glossary of genetic and medical terms, which would be more useful if the definitions were directly linked to words within the disease summaries. If carefully and frequently annotated, however, it will likely be a useful first stop for someone who has just found out that they or a family member is suffering from an inherited condition. LB

Mutant of the Month

We have gone vegetative in celebration of summer and give you *AGAMOUS* as the July MoM. This mutant *Arabidopsis thaliana* plant has homeotic changes in its flowers, with petals in place of stamens, and sepals in place of carpels. The gene encodes a MADS-box transcription factor that is part of a family of proteins required for proper shoot and flower development. The mutant flowers are indeterminate, thus having the structure (sepal-petal-petal)_n. *AGAMOUS*, which translates to 'unmarried' to indicate its asexual existence, is among the 'classical' mutants originally isolated by van der Veen and Koornneef. The phenotype matches that of mutations described even earlier, with the first exact description of the phenotype appearing as early as 1873, although it can't be confirmed that those plants carried *ag* alleles. Double flowers like those of *ag* mutants have been noted in species other than *A. thaliana* through the millennia, most notably in ancient Greece (roses), and China. *ag* was one of the original set of mutations used to establish the 'ABC' model of floral development. According to the model, AG protein has two functions: specification of stamens and petals, and repression of 'A' function. MS



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