

**Scientist:** Dr. Jessica Worthington Wilmer -Manager of the Molecular Identities Laboratory (Biodiversity Program)

**Topic:** Applications of DNA Analysis

Hello, my name is Jessica Worthington Wilmer, and I'm a research scientist here in the Biodiversity and Geosciences program at the Queensland Museum and I'm also the Manager of its Molecular Identities Laboratory.

Now, unlike the other sort of curatorial and collection staff at the museum, I am not a specialist taxonomist studying a particular group of animals. I am a geneticist and therefore my expertise is in the generation and interpretation of DNA sequence data or just genetic data sets. Now what that means is that in the day to day reality of life as a geneticist, we spend an awful lot of time pipetting clear liquids into clear plastic tubes.

However, we are allowed out of the lab from time to time to go into the field which takes us to some fabulous exotic locations and because our expertise is in DNA and nearly all living organisms ranging from Amoebas through to Zebras contain DNA, we get to work on the most amazing diversity of projects.

For example, some of the things that we are working on in the lab here at the moment are: we're looking at pycnogonids or what are called sea spiders from Antarctica; we use genetics to look at population structure of tiny little aquatic snails that live in the Artesian springs of the Australian deserts; we can use DNA to detect and diagnose flesh-dissolving parasitic diseases of commercially-important fish species; and also to identify new species of fabulous things like leaf-tailed geckos.

Now, if working on weird and wonderful creatures at a museum is not your particular thing or interest, then as a geneticist the skills and knowledge base that you'll attain can take you to jobs in things like a huge variety of research labs in university departments; you can go into clinical pathology laboratories; in hospitals and medical research institutes; you can work in forensic science laboratories; or even things like doing agricultural research projects in government agencies such as CSIRO and the department of Primary Industries. Thank you.

May 2009