

APPENDIX A

Citation and Response of the 2007 O. Max Gardner Award Recipient

DR. TRUDY F. C. MACKAY

Citation:

Esteemed scientist Dr. Trudy F. C. Mackay, William Neal Reynolds Distinguished Professor of Genetics of the College of Agriculture and Life Sciences at North Carolina State University, is widely recognized as the world's leading quantitative geneticist. Quantitative genetics is the study of complex traits; these are traits that are expressed as a consequence of interactions between multiple genes that are sensitive to environmental conditions. Quantitative traits include most characteristics important for breeding agricultural crops and animals, as well as human diseases. Because of its profound impact for agriculture and medicine, the importance of understanding the genetic basis of quantitative traits has far-reaching implications for the quality of life of the entire world population.

Born in New Brunswick, Canada, Dr. Mackay earned degrees in biology at Dalhousie University in Nova Scotia. She was then awarded her doctoral degree in genetics at the University of Edinburgh. Following her tenure at the University of Edinburgh, she joined the Department of Genetics at North Carolina State University in 1987 and has built an outstanding research program on the genetics of complex or quantitative traits.

Her colleagues note that Dr. Mackay's research accomplishments have changed the recent history and the future of quantitative genetics. In addition, her genetic and statistical analyses of quantitative traits in the fruit fly *Drosophila* have been used as models for studies of common human diseases, agronomically important traits in crop and domestic-animal species, and adaptive traits in natural populations. Her cutting-edge experiments have identified specific evolutionary mechanisms that maintain quantitative variation in nature. She is regarded as a leading figure internationally in bridging the gap between basic and quantitative genetics, with an ever-rising profile. Her receipt of the prestigious 2004 Genetics Society of America Medal is a notable recognition of her standing in the very large United States community of geneticists. Her election this spring as a Fellow of the Royal Society, which is the United Kingdom's national science academy, and indeed the oldest one extant, indicates her international standing as a scientist of the highest level.

Professor Mackay has made it her mission to provide young scientists with the highest quality of instruction in quantitative genetics. Her ability to convey complex genetic principles clearly and precisely is well known and admired around the globe. She coauthored the most popular introductory textbook of quantitative genetics, has taught modular courses in quantitative genetics worldwide as part of the Summer Institute for Statistical Genetics, and has lectured widely at seminars, conferences, and workshops. Many graduate students and postdoctoral fellows have benefited from her mentorship and many of them are now in tenured or tenure-track academic positions. Importantly, a very large number of young and midcareer researchers working in quantitative genetics have passed through her lab as graduate students, postdoctoral fellows, or visiting faculty. Dr. Mackay has been nationally recognized for both her research and mentoring accomplishments.

The University of North Carolina is indeed fortunate to have Dr. Trudy F C. Mackay as a distinguished member of its faculty. Her contributions to science, education, and the human race have advanced the standing of the University in the nation and the world. The Board of Governors takes great pleasure in presenting the 2007 Oliver Max Gardner Award to Dr. Trudy F. C. Mackay, William Neal Reynolds Distinguished Professor of Genetics, North Carolina State University.

Response:

This is spectacular. I have to confess that I was very nervous coming here. I have spoken before audiences of thousands of scientists and it was not nearly as nerve racking as waiting to see what Mitch had done with the video. It was quite scary.

I am so honored to be here. I know those who have also received this highest faculty award of the University of North Carolina and I humbled to be in that company. I am also proud to represent North Carolina State University and my field of endeavors, the genetics of complex traits, which continues to be a very exciting area of research.

I would like to thank a few people one more time. I will keep my comments brief. I thank the Board of Governors for conveying this honor on me. I am very happy that Sarah Gardner Naftolin and her husband, Josh, could be here. I would like to thank my nominator, Fred Gould, from the Department of Entomology; my husband and colleague, Robert Anholt; all of my colleagues in the Genetics Department and the W.M. Keck Center for Behavioral Biology;

and other colleagues at NC State for providing a stimulating environment since I have been there.

I would like to reiterate that I do not stand here alone. None of the work that I am being honored for would have been possible, if it were not for the excellent undergraduate students, graduate students, and postdoctoral fellows that I have had the luck and the joy to be able to host in my lab, and that are now continuing their endeavors. It is a terribly exciting time to be doing science and I look forward to many more years of 'fruitful' work.