Brain Banks Provide a Valuable Resource for Comparative Studies

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Recently, Iwaniuk [2010] noted the availability and usefulness of histological brain collections for comparative studies and stressed that such collections are often underused. One reason for this limited use may be that investigators want to process brain tissue in ways that are not represented in, especially, older brain collections. An alternative is to obtain whole brains or parts of brains from brain banks where brains and brain tissue are stored, usually after natural death, for future use by neuroscientists. Human brains are widely available. Some Old World monkey brains can be obtained from tissue programs at primate centers such as the University of

Washington Natural Primate Research Center. Lemur brains are sometimes available from the Duke University Lemur Center although these brains are frozen after death and are thus of limited use. Here we bring attention to the availability of the Primate Brain Bank in Amsterdam, The Netherlands.

The Primate Brain Bank is a department of the Netherlands Institute for Neuroscience (NIN). The brain bank was originally founded in 2000 by Prof. J. van Hooff and Dr. W.J. Netto of the Behavioral Biology Group of the Faculty of Biology at Utrecht University. Members of this faculty had been involved in primate research

since 1980 both in fieldwork in Indonesia and at Burgers' Zoo but also with a colony of macaques (*Macaca fascicularis*) housed at the university. By natural growth, the population of the colony reached over 100 monkeys, and the brains of animals that died, often after richly documented behavioral data had been collected, were preserved and made available for research. Later, arrangements were made to extend the collection by including the brains of primates that died in Dutch zoos. In 2009, the brain collection was moved from the University of Utrecht to the NIN in Amsterdam. The Primate Brain Bank is a non-profit organization that makes material

Fig. 1. **a** *Pongo pygmaeus pygmaeus*, female, 48 years. **b** *Gorilla gorilla*, female, 27 years.

Color version available online

available for research. It is partly funded by grants but also requires contributions from users.

Presently, the primate brain collection includes about 280 primate brains from 48 species. Most are from adults, but brains in a range of ages from newborn to very old are available for some species. Most of the brains are from species of macaques, but there are also brains from New World monkeys, lemurs, galagos, and baboons. At present, all of the brains of great apes that die in Dutch zoos are collected.

After death, the brains are perfused with fixative, removed, and postfixed for days to weeks. Subsequently the brains are stored in sucrose for optimal immunohistochemistry. Tissue is used for research purposes only, and applications for tissue require a description of intended use which will be reviewed to assign a priority. Typically, only entire brains or single hemispheres (fig. 1) will be given out after a suitable contribution. More information can be found on the website (<http://www.primatbrainbank.org>).

We are fortunate to have this valuable source of primate brains, and we look forward to this resource facilitating new, comparative research on primate brains.

Reference

- Iwaniuk AN (2010): Comparative brain collections are an indispensable resource for evolutionary neurobiology. *Brain Behav Evol* 76: 87–88.