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**Press release**

# Pretty good relatives

## Mandrills care for close maternal kin despite infection

*Göttingen, 26. February 2020.* **Our physical and psychological condition is decisive for our well-being. Humans who have a stable network of friends and relatives are therefor generally happier and healthier than others. Monkeys consolidate their relationships by social grooming. This physical contact strengthens social bonds and minimizes stress and conflict. The downside: Physical contact is the ideal basis for the spread of pathogens. One strategy to stop their transmission is to avoid infected individuals. Mandrills are able to do this because they can detect infected conspecifics by smell. Clémence Poirotte from the German Primate Center – Leibniz Institute for Primate Research in Göttingen and Marie Charpentier from the Institut des Sciences de l'Evolution de Montpellier (CNRS) have now shown that the animals do not avoid all group members equally. Close maternal kin do not reduce their care, even if this increases the risk of infection for them (Biology Letters).**

Clémence Poirotte conducted this study using six years of behavioral and parasitological data collected from a wild mandrill population inhabiting the Lékédi Park in Southern Gabon. This population comprises about 220 habituated individuals studied since 2012 as part of the long-term study "Mandrillus Project" led by Marie Charpentier. These Old World monkeys living in the dense rainforests are infested by various intestinal parasites, some with health consequences. Parasites spread through physical contacts, especially social grooming. The Mandrillus Project routinely determines the frequency and duration of social activities and the degree of kinship between the animals using genetic analyses, In addition daily faecal samples are collected to evaluate the parasite infestation of the animals. Up to seven sets of contagious parasites (amoebas) colonize the monkeys.

In many primate societies, such as the mandrills, highly differentiated social bonds usually occur between closely related group members. The Mandrills' strategy of not avoiding risky contacts altogether, but rather maintaining the bonds between mother and children and between maternal half siblings, stabilizes social relationships. "Even if close maternal relatives are highly contagious, the social effects of avoiding them seem to be more harmful than the hygienic or physiological disadvantages associated with social grooming," explains Clémence Poirotte.

**Original publication**

Poirotte C, Charpentier MJE.2020 Unconditional care from close maternalkin in the face of parasites.Biol. Lett.16:20190869. http://dx.doi.org/10.1098/rsbl.2019.0869

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**Printable pictures**: https://owncloud.dpz.eu/index.php/s/toFrffgty4sCm1u
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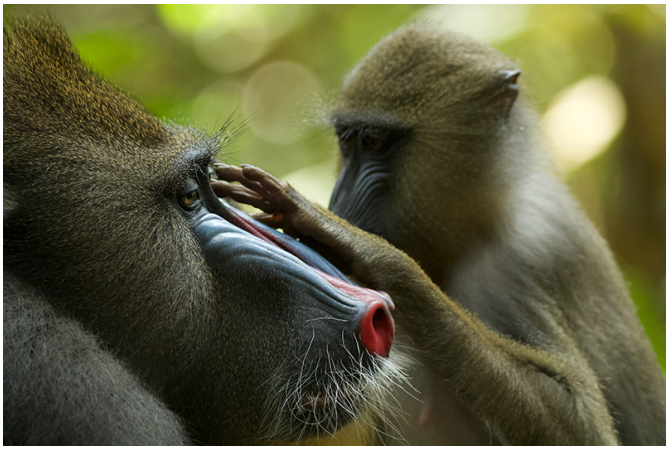
*The German Primate Center GmbH (DPZ) - Leibniz Institute for Primate Research conducts biological and biomedical research on and with primates in the fields of infection research, neuroscience and primate biology. The DPZ also maintains four field stations in the tropics and is a reference and service center for all aspects of primate research. The DPZ is one of the 96 research and infrastructure facilities of the Leibniz Association.*

**Photos with captions**

**(Download:** https://owncloud.dpz.eu/index.php/s/toFrffgty4sCm1u)

Grooming session between a mother and her daughters. In Mandrills close maternal kin do not reduce their care, even if this increases the risk of infection for them. Photo: Paul Amblard-Rambert

A juvenile female grooming her mother. Physical contact is the ideal basis for the spread of pathogens in Mandrills. Photo: Paul Amblard-Rambert



A female grooming the dominant male of the group. To stop the transmission of pathogens Mandrills avoid grooming infected individuals which are not close maternal kin. Photo: Paul Amblard-Rambert

Clémence Poirotte from the German Primate Center investigated how mandrills interact with conspecifics infected with intestinal parasites. Photo: Private