

# A Call to Ensure Access to Human Milk for Vulnerable Infants During the COVID-19 Epidemic

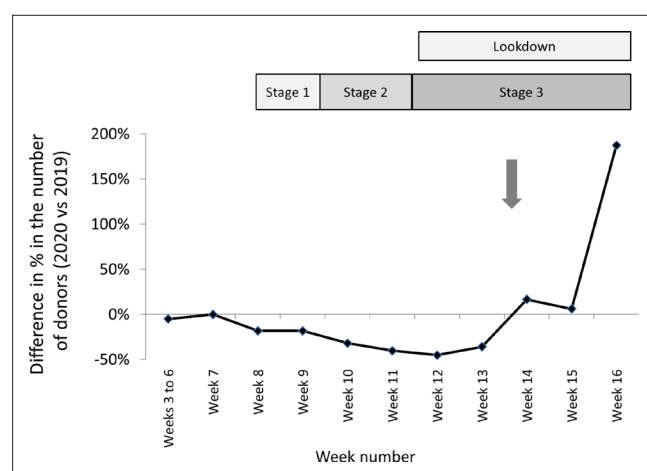
Recently, it has been stressed that human milk supplies in neonatal care units have become a concern. It was anticipated that donations to human milk banks could decline because of the COVID-19 epidemic (Furlow, 2020). Physicians seeking solutions may obtain human milk from other human milk banks, but this can only be a temporary solution. A more dramatic solution would be to start rationing donor milk, and allocating it only to the smallest and most at-risk preterm infants (Furlow, 2020).

The COVID-19 wave has hit France hard and we would like to share our experience as it could benefit other human milk banks around the world. Our human milk bank covers the entire Paris region, collects donor milk from 1,400 donors annually, and provides donor milk to about 40 institutions. We saw a drastic reduction of 30%–50% in the number of donors in the early stages of the epidemic and during the nationwide lockdown (Figure 1). This was likely due to breastfeeding women who had been in close contact with infected people being excluded from donating milk, and to the lack of clear

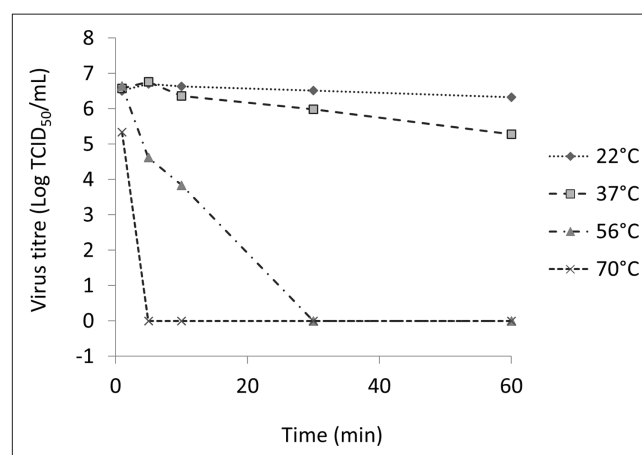
information on the possibility of continuing to donate human milk even after the stay-at-home orders, as well as to fear of being in contact with human milk bank staff.

Several arguments support the use of donor milk during the COVID-19 epidemic. Human milk samples tested from mothers with COVID-19 pneumonia are, to date, negative (Chen et al., 2020). As with other known respiratory viral infections, the WHO does not consider human milk to be a transmission vehicle for COVID-19, and many other health care organizations recommend direct breastfeeding, while implementing strict measures of infection control (Davanzo et al., 2020). The virus is very sensitive to heat: it is inactivated if heated to 56°C for 30 min, demonstrating that Holder pasteurization (i.e., 62.5°C for 30 min) is effective for preventing any contamination of the donor milk (Chin et al., 2020; Figure 2).

To tackle this crisis, we have taken several actions: We have (i) trained collectors to safely collect donor milk at



**Figure 1.** Weekly Comparison of the Number of Breastfeeding Mothers Effectively Donating Their Milk to the Paris Human Milk Bank in 2020 Vs. 2019. The Different Epidemic Stages (Stages 1–3) According to the Governmental Definition\* and the Start Date of the Lockdown Period are Indicated. The Arrow Specifies the Beginning of the Actions Taken by the Human Milk Bank.



**Figure 2.** Stability of Sars-cov-2 at Different Temperatures. The Virus (Final Concentration ~6.8 Log Unit of 50% Tissue Culture Infectious Dose [TCID<sub>50</sub>] Per ml) Was Incubated at 22°C, 37°C, 56°C, 70°C for Up to 60 Min. The Stability of the Virus Decreased with the Increase of Temperature: at 56°C for 30 Min, and at 70°C for 5 Min the Virus Was Inactivated (adapted from Chin et al., 2020).

home; (ii) made exclusion criteria regarding donors less restrictive (e.g., by revising the list of contraindicated drugs, and by excluding only mothers with COVID-19 symptoms); and (iii) launched a widespread awareness campaign across neonatal units, maternity wards, healthcare networks, and through general public regional media. The latter was aimed at bolstering an understanding that pasteurized donor milk is a vital resource for preterm infants whose mothers cannot provide their milk, and at reassuring people that this practice is safe for both preterm infants and the donors themselves.

The results of these actions exceeded our expectations: We witnessed a rise in the number of donors (Figure 1) and we raised overall awareness and fostered a genuine sense of meaning in donating mothers, as testified by one mother: “Being partially unemployed and seeing all these professionals fighting from morning to night to save patients made me feel purposeless at home. I have time at home, with my daughter whom I breastfeed, and, by drawing my milk and donating it, I feel useful.”

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