Diagnosed infectious agents in free-ranging and captive primates from the Amazon region

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Introduction

Nowadays the concept "One world, One health" is very popular and recognizes that human , animal health and environment health are linked, suggesting a necessarily net-work to prevent risks towards human and non-human primates (NHPs) and conservation. (Frank, 2008).

There is a crescent fear towards public health and that is the incidence increase of emerging or/and re-emerging pathogens on the society. NHPs are phylogenetically related to humans, as a consequence we have a lot of etiologic agents in common. A lot of this pathogens have importance in public health. (Wolfe et al, 1998)

On the other hand, the red List of IUCN, includes 20 species of NHPs as Critically Endangered, another 48 species as Endangered, and 46 species as Vulnerable, being primates the four most affected order in class Mammalia.
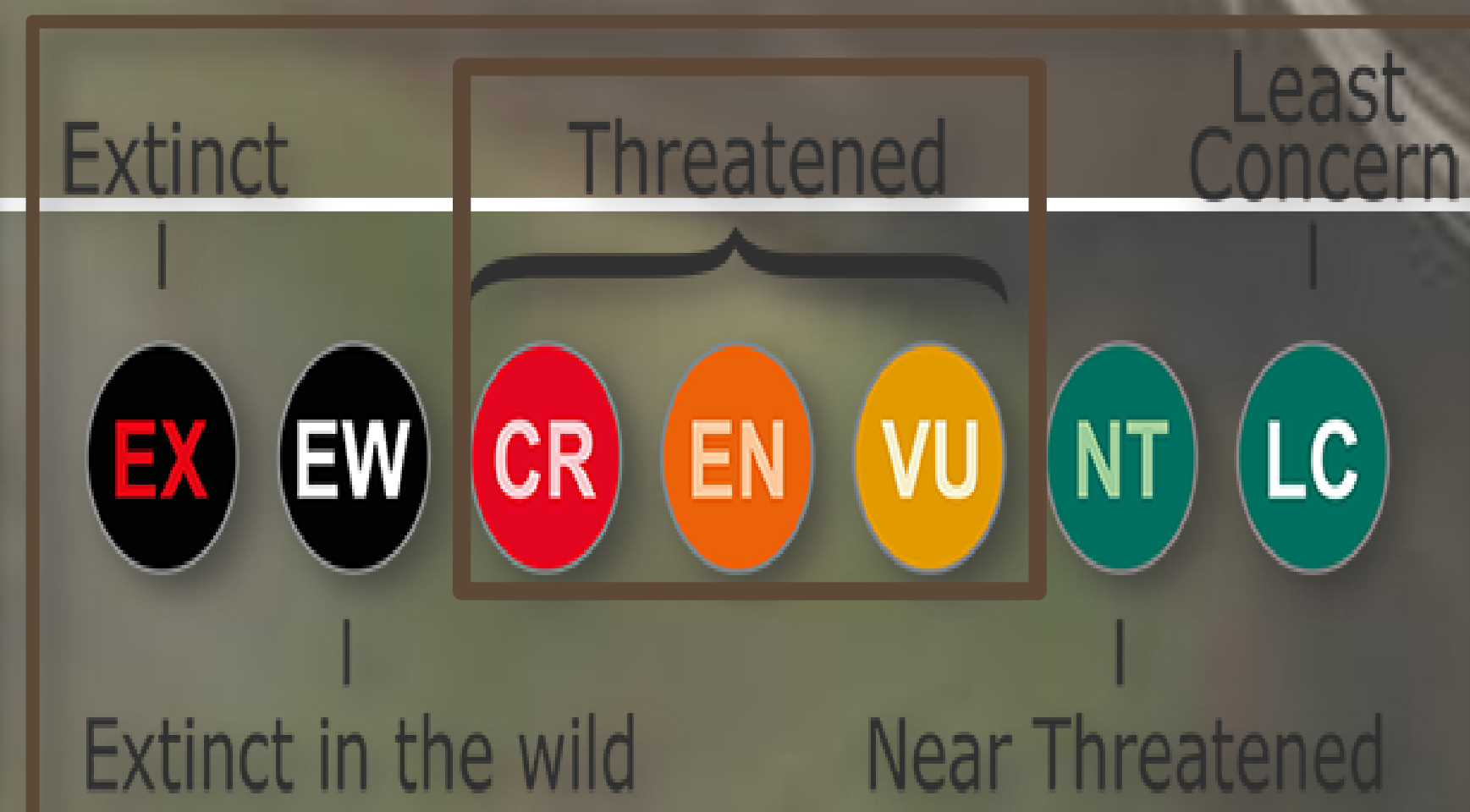
Fig 1. One world, One Wealth concept

Fig 2. IUCN classification of endangered species

Objective

The aims to carry out a bibliographic research of the infectious diseases in non-human free-ranging primates from the Amazon region.

Methodology

Bibliography research of scientific articles was conducted through net platforms (Pubmed) and scholar google (https://scholar.google.es/scholar).

The guideline we used was:

| Free-ranging non-human primates | No experimental non-human primates | Amazon region | Diseases that we selected previously |

Most relevant results

• Of the non-selected 200 articles searched, only 20% (n=40) had all of selected conditions.

• Of the analysed 40 articles, 51,2% were made in Brazil, 26,8% in French Guiana. (Fig.3)
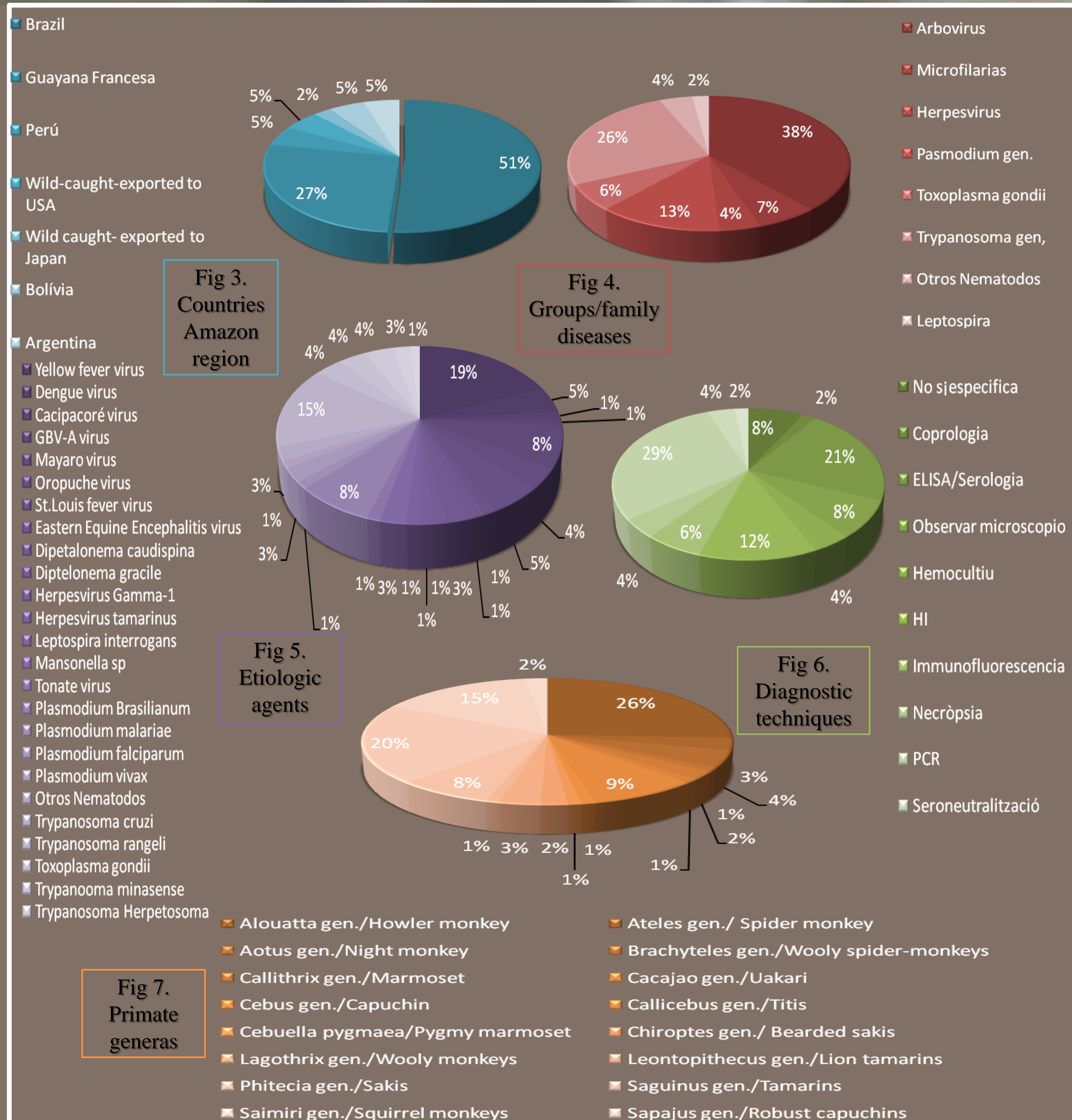
• Of the analysed 40 articles, 73,9% studied zoonotic diseases whereas 26,0% worked with non-zoonotic diseases, and included a 85,3% of vector-borne diseases .

• Of the analysed 40 articles, groups or families of diseases and etiologic agents that had more bibliography were: Arbovirus (38,2%), Trypanosoma sp. (24,8%) and Plasmodium sp. (12,4%). (Fig.4)

• Of the analysed 40 articles, etiologic agents that had more bibliography were: Yellow fever virus (18,7%), *Trypanosoma cruzi* (15,0%), Mayaro virus (7,5%) and *Plasmodium brasilianum* (7,5%). (Fig.5)

• Of the analysed 40 articles, diagnostic techniques that were used more frequently on the different studies were: PCR (29,4%), Serology-ELISA (21,55) and HI serology (11,7%). (Fig.6)

• Of the analysed 40 articles, primate generas that had more bibliography were: *Alouatta* or howler monkey (25,8%), *Saguinus* or tamarins(20,4%) and *Saimiri* or squirrel primates (15,1%). (Fig.7)

Fig 3. Countries Amazon region

Fig 4. Groups/family diseases

Fig 5. Etiologic agents

Fig 6. Diagnostic techniques

Fig 7. Primate generas

Conclusions

➢ There is scarce available scientific information on non-human neotropical primate diseases in the wild.

➢ Most articles (73,9%) studies zoonotic diseases.

➢ The most studied diseases are Arbovirus family (38,2%) and hemoparasites (37,2% *Plasmodium* sp. and *Trypanosomes* sp.).

➢ In the Amazon region, Brazil (51,2%) and French Guiana (26,8%) have the larger number of diffused articles.

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