Dear Editor,

Please find attached a revised version of the ms#18821 entitled: “Potential geographic distribution of the genus *Micrurus* Wagler, 1824 (Serpentes: Elapidae) and antivenom supply in Rio de Janeiro State, Brazil”.

We followed most of the points stressed by the reviewers, which certainly contributed to a significant improvement of the quality of the manuscript.

The analyses of ecological niche modeling were completely restructured, and we now implemented five algorithms in order to compare the results of these different models. This decision meets several demands of the reviewers.

Below we explain all the remaining points stressed by both reviewers.

Reviewer 44882

* All grammar suggestions were accepted.
* The countries and states of the consulted collections were added.
* Unfortunately, there is no information on the specificity of the antivenom distributed to the hospitals by the Brazilian government. We exhaustively tried to obtain this information from literature data and mainly from the official organs of the government (namely: municipal and state secretaries of Health of Rio de Janeiro and even from the Brazilian Ministry of Health). We contacted these organs by phone, e-mail and visited some hospitals. In general, they claimed this information was not available and sometimes the information was deliberately denied. The only more specific information was obtained by one of the authors (Claudio Machado – this is stressed in the text) who works at Instituto Vital Brazil and regularly participates of symposiums and meetings where these issues are discussed and some data is presented. However, most of these results are not published. Besides these data, we included all the available information that could aid in this study (articles published in scientific journals, annals of congress, government reports, websites). The difficult to obtain this kind of information from the government (and the fact that it simply does not exist in some cases) reinforces the importance of studies that try to instigate this kind of discussion.
* We added to the text studies showing that the venom composition of the different species of *Micrurus* is quite complex and shows variation, even among sympatric species. The antielapidic antivenom is produced from the venom of two species of *Micrurus* (one of these not occurring in Rio de Janeiro state) and it is not effective for all species in Brazil. Even though the antivenom distributed by the government is the same, we believe that to infer the potential distribution of each *Micrurus* spp. separately is fundamental in view of a potential variation of the venom. Pragmatically, the distributions of the species were further overlapped in order to infer the potential distribution of the genus in Rio de Janeiro State in order to correlate these data with the distribution of the hospitals with snake antivenom.
* We added the distances between hospitals as well as data on the time between the accident and hospital care.
* We also compared our study with other from Ecuador as recommended by the reviewer.

Reviewer 46222

* All grammar suggestions were accepted.
* We used all available and confident records for all the species, especially those with reduced sample size. However, there are no records from 19th century as pointed out by the reviewer. We have only a few records from the 1940´s and none of them disagree with more recent records. Besides, most of the older records were overlaid by more recent records.
* We added in the text that we used the entire species distribution to calibrate the models.
* We used the more accurate resolution of ~ 1km due to the relatively reduced study area (Rio de Janeiro State). In general, we rarely have the exact coordinates from the point of collection of a snake, especially when one leads with collection data back to the 1960’s, 1970’s. Furthermore, this study aims to predict potential areas of distribution of *Micrurus* and, consequently, the record for a given municipality is relevant, independently of the exact locality or microhabitat where the specimen was collected.
* Unfortunately, our study comprises no data on land cover of the Rio de Janeiro State. This information certainly would add to the data gathered here. However, once again, considering that we aim to estimate potential areas of distribution of *Micrurus*, to restrict these distributions to areas based on land cover theoretically appropriate for a given species may lead to biased results. Even in an extremely anthropized region, with little land cover/biological conditions suitable for *Micrurus* or other snakes, a remnant population may persist. Finally, the bioclimatic variables used to build the models are based on average monthly climate data and could be interpreted as an indirect predictor of land cover condition. Data on land cover would definitely increase the power of interpretation of the data generated by the models, but we argue that the lack of this methodological tool does not invalidate our findings.
* We added in the text that the “re-examined errors” mentioned by the reviewer are actually “taxonomic errors”.
* We clarified in the text in what manner the bioclimatic variables were obtained. We evaluated biological aspects, besides mathematical criteria, to select the bioclimatic variables used for model construction.
* There are no available shape files of the administrative areas of Rio de Janeiro State to add to the map of the hospitals. The solution was to join the maps of administrative regions and hospitals into a single figure (A and B).

We hope that with these modifications the manuscript is now suitable for publication in Oecologia Australis.

Sincerely,