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Ceske Budejovice, January 13, 2023

Dissertation of **Vinicius Silva Kavagutti** entitled:

Microbial and Viral Genomic Diversity in Freshwater Environments

Supervisor's assessment

Vinicius joined the lab in 2017 as a PhD student when I received my first project here in Ceske Budejovice. It was a new experience for both of us. At the beginning of this work there was almost no data to work with so he took it upon himself to create metagenomic datasets that were necessary. In the meantime he worked hard to refine methods of analyses and quickly picked up skills in sequence analyses and comparative genomics. Hardly anything was known about freshwater viruses it was a very challenging task but it was impressive how he handled vast amounts of data and his organizational skills became apparent to all of us. Thanks to his persistent efforts we have a long metagenomic time series on the Rimov reservoir that has benefitted many of us. He further expanded this work to include high frequency sampling to identify major players in the freshwater spring bloom, creating a truly interdisciplinary work and brought exciting new insights on this complex phenomenon. During this entire time he has worked and collaborated with several researchers with varied expertise, and not only has he gathered skills in metagenomic data analyses but also in laboratory work and has had great recent success in isolation of the first viruses of freshwater actinobacteria. Apart from this he has presented his work in international conferences and has also been a key figure in many sampling campaigns all over Europe.

The topic of the PhD is relatively broad but only because when it started very little data was available. It is also indicative of the exploratory nature of the work. However, he has been instrumental in generating data and its interpretations and finally formulating his results in high quality manuscripts that led to the publications that form this thesis.

Vinicius was an excellent PhD student and it was a great pleasure to work with him. I wish him great success for the future and am in no doubt he will do well wherever he will go. I fully support his application for a PhD degree.

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