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IGCP 735 (2021–2025): Rocks and the Rise of Ordovician Life: Filling knowledge gaps in the Early Palaeozoic Biodiversification (Rocks n'ROL)

Bertrand Lefebvre ^{1*}, Yves Candela², Khadija El Hariri³, Mansoureh Ghobadi Pour^{4,5}, Elena Raevskaya⁶, Oive Tinn⁷, Beatriz Waisfeld⁸ & Wenhui Wang⁹

¹ Univ Lyon, Univ Lyon 1, ENSL, CNRS, LGL-TPE, F-69622, Villeurbanne, France

² Department of Natural Sciences, National Museum of Scotland, EH1 1JF, Edinburgh, UK

³ Ecole Normale Supérieure, Cadi Ayyad University, Marrakesh, Morocco

⁴ Department of Geology, Faculty of Sciences, Golestan University, 49138-15739, Gorgan Iran

⁵ Department of Natural Sciences, National Museum of Wales, CF10 3NP, Cardiff, UK

⁶ JSC "Geologorazvedka", Branch of Russian Geological Holding JSC "Rosgeo" in Saint-Petersburg,

192019, St.Petersburg, Russia 7 Institute of Ecology and Earth Sciences, University of T

⁷ Institute of Ecology and Earth Sciences, University of Tartu, Faculty of Science and Technology, 50411, Tartu,Estonia

⁸ Centro de Investigaciones en Ciencias de la Tierra / Earth Sciences Research Centre (CICTERRA) -

National Council for Scientific and Technological Research (CONICET) - National University of Córdoba. Córdoba, Argentina⁹ School of Geosciences and Info-Physics, Central South University, 410083, Changsha, PR China

Deciphering the complex interactions between climate change, biodiversity and ecosystem structuration is a major societal issue for future generations. The geological record offers the unique opportunity to document the impact of environmental changes in the biosphere in the past, and thus to provide some clues for the future. In this context, the Early Palaeozoic is probably one of the most critical intervals to document such interactions between biotas and the Earth system. This interval embraces major evolutionary events such as the Cambrian Explosion and the Great Ordovician Biodiversification Event, but also major shifts in climate with a dramatic impact on the biosphere. Recently, the development of large-scale collaborative palaeontological databases promoted high-resolution analyses of biodiversity patterns, which could be compared with different environmental proxies. However, most available data are so far strongly biased towards some geographic areas (Europe, North America) and time Cambrian, Middle-Upper intervals (lower-middle Ordovician). Through а multidisciplinary approach, and in close collaboration with the International Subcommission on Ordovician Stratigraphy, the project aims at filling the numerous knowledge gaps in most regions of the world (e.g. Africa, Asia and South America), with a special focus on less- documented time intervals (e.g. late Cambrian to Early Ordovician).