

Date: 23 April 2021

Letter of Collaboration

Dear Dr. Falk,

We are considering your proposed project “Ozone Damage Interference on Nutrient Allocation (ODINA)” an innovative and important research effort and are excited to collaborate with you to achieve the project goals. Ozone dry deposition is a crucial mechanism for ozone loss from the atmosphere and thus of ultimate importance for projections of ambient air quality and public health. Furthermore, ozone uptake reduces stomatal conductance and photosynthesis and is thus deteriorating plant health with implications for the carbon budget. Therefore, representing the full width of effects of ozone dry deposition in current generation earth-system models will improve the representation of land-atmosphere interactions including feedback processes, and overall reduce some key uncertainties associated with model projections.

We are pleased that you have chosen to further delve into the effects of ozone dry deposition on atmospheric composition and the biosphere during the course of your Lise-Meitner Fellowship at the University of Natural Resources and Life Sciences, Vienna (BOKU). In particular, since a prime target of the ODINA project is to advance the process-level representation of ozone damage on vegetation by introducing an online-coupled biosphere feedback on the dry deposition scheme and thus improving both carbon sequestration and atmospheric composition in the Norwegian Earth System Model (NorESM). Your research will in many ways benefit the representation of high latitude ecosystems and their climate interactions within the NorESM. Therefore, the ODINA project is well aligned with activities and goals of the internationally recognized EMERALD project led by the section for Meteorology and Oceanography (MetOs) at the department of Geosciences, University of Oslo (UiO).

We are looking forward to continue our well-established collaboration with you and join in the cooperation with the colleagues at BOKU Vienna on the planned model extensions. MetOs will provide a platform for



Postal address: PO Box 1047 Blindern
0316 Oslo, Norway
E-mail: geosciences@geo.uio.no
Web: www.mn.uio.no/geo/

scientific exchange on land-atmosphere interactions and continued technical support through the CLM Norway team. We hope your project is selected for funding by the Austrian Science Fund (FWF), so we may continue our well-established research collaboration.

Sincerely yours

A handwritten signature in black ink, reading "Terje Berntsen". The signature is written in a cursive style with a large, sweeping "T" and a long, horizontal stroke for the "B".

Terje Berntsen

Professor
Head of Section for Meteorology and Oceanography