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PhD in plant ecophysiology

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(Thesis about effects of acidic deposition
on forest trees)

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BIOSYNTHESIS, STORAGE AND EMISSIONS OF BVOC'S IN BOREAL FORESTS UNDER CLIMATE CHANGE

Aims:

- (ii) to analyse and quantify the connections between BVOC emissions and plant physiological activity
- (iii) to analyse the dependence of BVOC emissions on environmental factors
- (iv) to apply the obtained results in order to predict BVOC emissions in future.

Dynamic model of BVOC emissions (Bäck et al 2005)

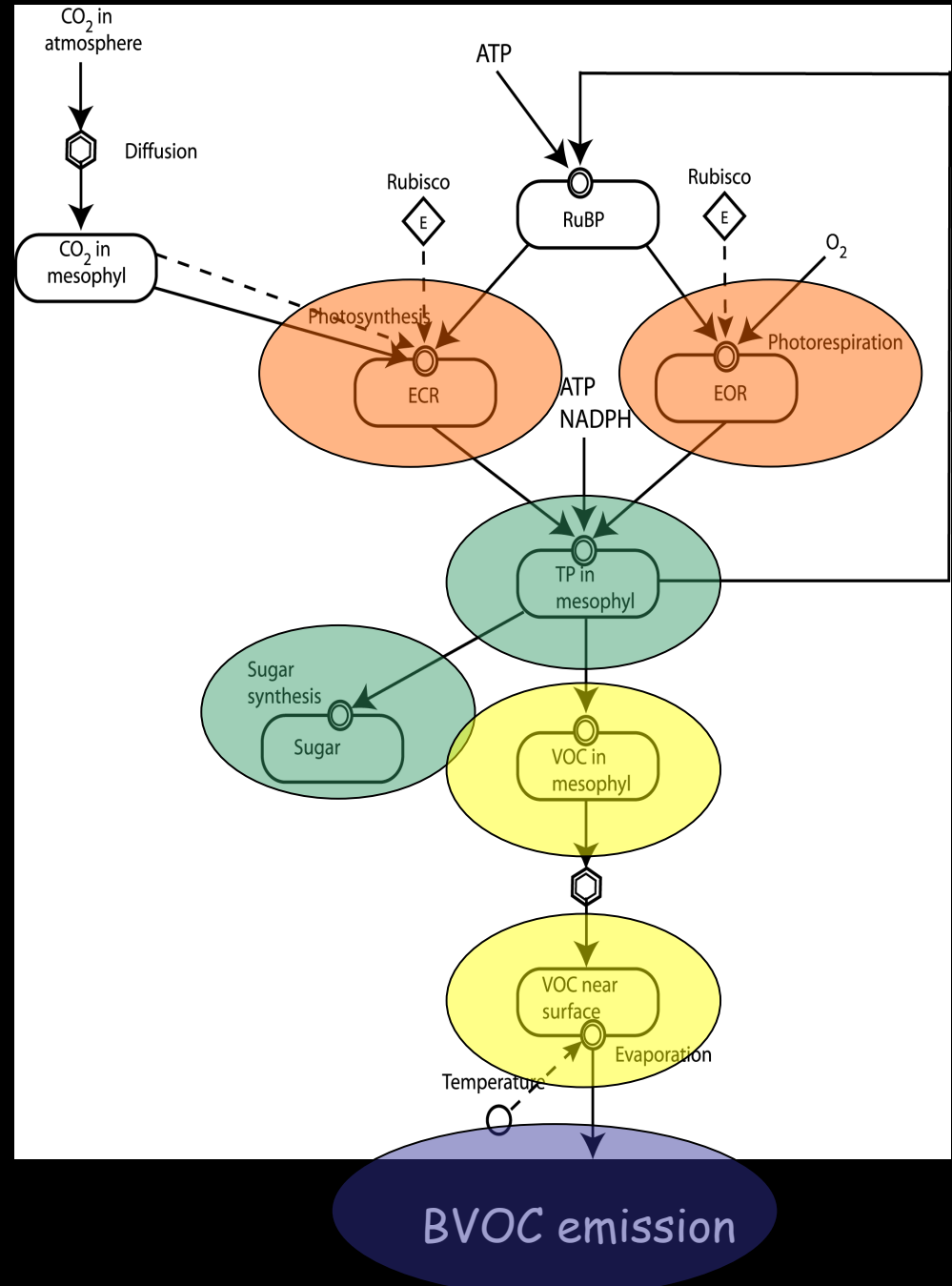
- Atmospheric CO_2 assimilated into 3-C compounds: dependence on T, PAR, VPD
- Alternative uses for assimilates:

- Growth, primary metabolism

- Secondary metabolism such as BVOC biosynthesis

- Temporary and permanent storages in tissues

- Emissions from the storage: dependence on T



Links to the topics in this workshop:

- SOA precursor formation
 - Factors involved temporally? Regionally? Globally?
- SOA chemical composition
 - Monoterpenes? Sesquiterpenes?
- BVOC sources and biological functions
 - Vegetation? Soil? Pathogens? Other stresses?