Fluorescence microscope Olympus (60,652.4 €)
Such microscope or at least comparable type was not available. This instrument is shared by two labs focused on cell and evolutionary biology of Caenorhabditis elegans algae such as diatoms, dinoflagellates and chromerids as models. Fluorescence is used to detect GFP, YFP, Mitotracker and autofluorescence (e.g. of plastid) and high quality pictures are made using cooled digital camera.

Inverted microscope for Ca imaging (73,244.43 €)
Inverted microscope equipped with Nomarski differential interference contrast optics, filter set for calcium imaging using fura-2 AM, fluorescence, digital camera, and software for calcium measurement. Main use is in the studies of energy homeostasis and the signaling from GPCR receptors that are very limited by the lack of equipment. Many investigations also require observations of morphological dynamics in vivo, which are difficult to perform on an upright microscope.

Polarizing fluorimeter (19,103.4 €)
Fluorescence spectrophotometer equiped with two polarizing filters mainly serve to measure physico-chemical properties (order, fluidity) of phospholipid vesicles prepared from cell membranes. Membrane fluidity is finely tuned to seasonal changes of ambient and body temperature and thus represents one of major lines of adaptation to changing environment. In combination with other techniques already available (GC-MS, LC-MS, differential scanning calorimetry), it will be possible to conduct very sophisticated functional experiments.

Fast protein liquid chromatography (FPLC) (64,814 €)
Work of several teams on the separation of proteins and other biomolecules is hindered by the lack of FPLC. Purchased instrument will be mainly used for purification of recombinant proteins expressed in bacterial, yeast or baculovirus expression systems. FPLC will complement currently used affinity chromatography, ion exchange chromatography and gel filtration columns.

Microrespirometer (Seahorse machine) including thermoregulatory chamber (122,737.99 €)
Seahorse machine uses a unique experimental setup to simultaneously measure the real time kinetics of mitochondrial respiration and glycolysis, two major energy producing pathways of the cell. It uses the 24-well format to assess these parameters on cultured cells, primary cells, tissues and isolated mitochondria. This offers a new and unique possibility for scientists to determine physiological metabolic parameters in continuous real time assays.

Microplate reader (37,558.13 €)
ELISA and similar methods are used by most teams. Multiple measurements require full range of detection methods (absorbance, fluorescence or luminescence mode) in plates with 6- to 384-wells. Requested reader is used mainly for kinetic measurements of high variability of enzymatic reactions employing colored, fluorescent or luminescent substrates.

Behavioral chambers with light regulated systems (13,153.3 €)
Research of circadian and photoperiodic clocks involves studies where light quality is critical. Behavioral chambers with custom made LED based system allow study routinely the entrainment of circadian clock and light input to photoperiodic time measurement.

Real time PCR machine (15,338.27 €)
Gene expression studies, control of RNAi knock-downs, chromatin immuno-precipitation and many other experiments require precise DNA quantification.

Efficient server computer (17,746.46 €)
Highly efficient server computer, such as 1Tb RAM, A+ Server 2042G-6RF, Supermicro Computer, Inc.) was needed for assembling New generation Sequencing data such as Illumina data and 454 data. As the importance of bioinformatics grows rapidly, the computer is used by many researchers.

Gradient Master and Piston Gradient Fractionator (18,091.01€)
Gradient station such as Gradient Master and Piston Gradient Fractionator, Science Services, can perform both gradient forming and fractionating. A system capable of creating identical gradients is crucial for studies of high molecular weight complexes. The instrument is used by many research groups.