

Student Performance Assessment ("Leistungskontrolle")

Biological Chemistry B: New Enzymes from Directed Evolution Experiments (BSc Biology: Learning Unit 529-0739-01L)

(6 ECTS credit points)

Marked semester performance: Credit points can only be earned if the candidate

- (i) actively takes part in the **entire** 3.5-week program,*
- (ii) turns in a final report (see guidelines listed below), and
- (iii) obtains at least grade 4.0 (scale 1-6; 4 = pass; 6 = top grade).

The grade reflects the performance of each participant and is based on: (1) effort/participation/presentation (30%), (2) skills or acquisition of skills during the course (30%), and (3) quality of the report according to the guidelines on the following page (40%).

* If you have to miss –or are late for– any part of the course, please send as early as possible an e-mail to kast@org.chem.ethz.ch stating the reason and the date and time period affected.

Guidelines for the report to be turned in following the lab course "Biological Chemistry B" (529-0739-01L)

Each participant turns in **either** an individual paper **or** contributes an equal share to a joint report of the team of two course participants. In the latter case, a statement must accompany the report, detailing the contributions of each author in the following way: "Author contributions. A.B. wrote sections xxx, and C.D. is responsible for sections yyy." In addition, the "Declaration of Originality" must be obtained from the ETH web page, filled in, originally signed, and handed in by each course participant to state the absence of plagiarism (see <https://www.ethz.ch/students/en/studies/performance-assessments/plagiarism.html>).

The report must be written in the format of a **short** publication, exactly following the formalism for a JACS (*J. Am. Chem. Soc.*) Communication. See "**Information for Authors**" and recent sample issues for guidelines and style. Observe the word limit and special structuring of a JACS **Communication!** Appropriately labeled additional tables and figures should be provided as "Supporting Information Available" and referenced in the main text. The deadline for turning in the report is **December 21, 2023** (the page with the original signatures and the lab journals may be submitted later).

Besides adhering to the JACS Communication format, the following criteria will be used for the grading (counting 1/10 each):

- (A) Abstract: correct, concrete (with relevant data), concise, and conclusive?
- (B) Introductory *paragraphs*: background and system briefly described, concisely leading to project goals, supported with correct original literature citations?
- (C) Methods (*integrated in the results*): all briefly covered, correctly rendered, appropriately referenced to course script rather than repeating details?
- (D) Results & discussion *paragraphs*: all results covered (library sizes & complementation data & clone nomenclature; *in vivo* phenotypes; sequence information & statistics; protein purity, yield, concentration & kinetic results; all biophysical characterization)?
- (E) "Nice, coherent story" with clearly structured, logical description of experiments and interesting, catchy discussion, correctly connected to the literature?
- (F) No mistakes regarding the rationale and concept of the project? Is the scientific nomenclature and format correctly & consistently used?
- (G) Significant individual contributions / overall effort for the report (no "plagiarized" sections)?
- (H) Formalism: is the format of in-text citations and the reference list correct & consistent, all display items cited sequentially, all tables and figures appropriately labeled, all Supporting Information referenced in the main text?
- (I) Scientific & mature English, carefully written and proofread?
- (J) Kept the deadline?

P. Kast, April 7, 2023