

iGEM Team Uni Freiburg 2011

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In the future more therapeutic proteins will be produced by the pharmaceutical industry to cure various diseases. The key to allow less developed countries to improve their own research in this field lies in making large scale protein purification fast and affordable but also ecofriendly to save precious resources. By eliminating routine use of expensive materials, our novel tool will utilize sustainable laboratory equipment and widespread His-Tag technology to guarantee reliable protein purification for all.

We propose an expression system induced by blue, green and red light, combined with subsequent temperature controlled autolysis of *E. coli*. Purification of the his-tagged protein of interest will be accomplished by an adaptor protein of our own design which binds the His-Tag on one side and the surface of serological pipettes on the other. Two subsequent pipetting steps for washing and purification of the cell lysate will quickly elute the product."