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Reference Letter for Christopher Weingarten

To Whom It May Concern,

I am delighted to write this letter in strong support of Christopher Weingarten for any forthcoming opportunities in his scientific and academic career. I have had the pleasure of supervising Christopher's Master's thesis, during which he established a computational protein design approach to create nanostructured protein materials, a task he took on with excitement and dedication. From my experience working with him, I can wholeheartedly recommend Christopher for any future openings and opportunities.

Over the course of nine months, Christopher impressively exploited a range of computational tools like Rosetta, Amber Molecular Dynamics Simulations, AlphaFold, and ProteinMPNN for designing 2D and 3D protein nanostructures. To effectively combine these software packages, Christopher constructed a sophisticated Python pipeline, demonstrating innovative thinking and excellent problem-solving skills. Christopher further validated his designs experimentally by recombinantly expressing and purifying the design hits, assaying their oligomeric state (size-exclusion chromatography, electron microscopy, and optical densitometry), and ligand binding (isothermal titration calorimetry, circular dichroism spectroscopy). This practical aspect of his work underscores Christopher's proficiency in employing cutting-edge molecular biology techniques, reinforcing his theoretical work with experimental results.

Christopher also engaged in collaborative efforts with the University of Basel, effectively utilizing their cryo-electron microscopy facilities to confirm the structures of computationally designed protein nanostructures. This successful collaboration highlights his ability to integrate resources from different disciplines, enhancing the impact of his research.

Throughout his time in my group, Christopher frequently presented his work, articulating complex concepts with clarity and confidence. He seamlessly integrated into my group, significantly supporting the projects of other group members. His technical expertise and collaborative nature greatly enhanced the productivity and synergy of my team.

In my experience, Christopher ranks among the top 5% of the students I have supervised in terms of innovation, technical skills, and overall contribution to my research. His exceptional problem-solving abilities, remarkable independence, and rigorous scientific approach distinguish him as an outstanding scientist. Particularly, his skills in computational protein design are extraordinary, and I have the utmost confidence in Christopher's abilities and potential contributions to any academic or industrial setting. I enthusiastically endorse Christopher for any future positions or opportunities he pursues in this field.

Please feel free to reach out if you need further information or insights regarding Christopher's qualifications and capabilities.

Sincerely,

Dr. Adrian Bunzel
Group Leader and SNSF Ambizione Fellow

Prof. Dr. Sven Panke
Prof. of Bioprocess Engineering, ETHZ