# Probiodrug to Present at Drug Discovery USA 2015

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***ECHEMINFO Conference on Advances in Drug Discovery and Design at Johns Hopkins, Baltimore, USA***

HALLE/SAALE, Germany, 09 February 2015 - Probiodrug AG ("Probiodrug", Euronext: PBD), a biopharmaceutical company developing novel therapeutic solutions to treat Alzheimer's disease, today announced that Mirko Buchholz, PhD, Senior Scientist Computational/Medicinal Chemistry at Probiodrug[1] has been invited to present at the Echeminfo Conference "Drug Discovery USA 2015 - Advances in Drug Discovery and Design" taking place at Johns Hopkins, from 9th to 11th February in Baltimore, USA.

The presentation entitled, "*The devil is in the details: A comprehensive analysis of inhibitor-enzyme interactions by using a combined **in silico/in vitro**approach*" is scheduled within Session 3 *"Applications of Quantum Mechanics in Structure Based Drug Discovery"* on Tuesday 10th February 2015, from 9 am to 12 pm EST.

The presentation will illustrate the value of crystallographic data towards interpretation of Quantitative structure-activity relationship (QSAR) studies, as used in design of Probiodrug's first compound series of Glutaminyl Cyclase (QC) inhibitors[2]. Applying quantum-mechanical methods as well as site-directed mutagenesis studies, additional information is provided regarding the possible binding mechanism and key interactions of a potent QC-inhibitor with the active site of the receptor. These data have been published[3].

**Inge Lues, Chief Development Officer of Probiodrug, commented:** "The strategy and data presented are part of Probiodrug's med chem efforts to design potent and selective small molecule QC inhibitors with drug like properties and sufficient brain exposure to be developed for the treatment of Alzheimer's disease. Our lead product PQ912 is currently in Phase 2a."

For more information please visit http://www.echeminfo.com/events/drug-discovery-usa-2015/s3-inhibitor-enzyme-interactions.

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**Notes to Editors:**

**About Probiodrug AG**
Headquartered in Halle, Germany, Probiodrug AG is a biopharmaceutical company focused on the development of new therapeutic products for the treatment of Alzheimer's disease.

Founded in 1997, the company successfully developed a novel therapeutic concept for diabetes - the DP4 inhibitors - which provided the basis for a novel class of antidiabetics - the gliptins. Its core capabilities are based on its long-standing expertise in the elucidation of the structure and function of enzymes involved in the modification of proteins and peptides, which play a central role in pathological conditions.

Today Probiodrug's aim is to become a leading company in the development of Alzheimer's disease treatments and to thereby provide a better life for Alzheimer's disease patients. It has identified a new therapeutic concept linked to disease initiation and progression. The development approaches are targeting pyroglutamate-Abeta (pGlu-Abeta) as a therapeutic strategy to fight Alzheimer's disease. The Company has medical use and composition of matter patents related to the inhibition of Glutaminyl Cyclase (QC) and anti-pGlu-Abeta- specific monoclonal antibodies, providing it, in the Company's view, with a leading position in this field of research. www.probiodrug.de

**About Alzheimer's disease**
Alzheimer's disease is a neurological disorder, which is the most common form of dementia, and ultimately leads to death. Because Alzheimer's disease cannot be cured and is degenerative, the affected patients must increasingly rely on others for assistance. Today, over 35 million people worldwide currently live with the condition and this number is expected to double by 2030 and to more than triple by 2050 to 115 million (World Alzheimer Report 2013).

**Forward Looking Statements**

*Information set forth in this press release contains forward-looking statements, which involve a number of risks and uncertainties. The forward-looking statements contained herein represent the judgment of Probiodrug AG as of the date of this press release. Such forward-looking statements are neither promises nor guarantees, but are subject to a variety of risks and uncertainties, many of which are beyond our control, and which could cause actual results to differ materially from those contemplated in these forward-looking statements. We expressly disclaim any obligation or undertaking to release publicly any updates or revisions to any such statements to reflect any change in our expectations or any change in events, conditions or circumstances on which any such statement is based.*

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[1]Mirko Buchholz, PhD, has been an employee of Probiodrug and is currently a consultant to the company. His new affiliation is Head Unit Drug Design and Analytical Chemistry, Fraunhofer Institute for Cell Therapy and Immunology IZI, Department of Drug Design and Target Validation MWT, Biocenter, Weinbergweg 22, 06120 Halle (Saale), Germany.

[2] The First Potent Inhibitors for Human Glutaminyl Cyclase: Synthesis and Structure-Activity Relationship. Mirko Buchholz, Ulrich Heiser, Stephan Schilling, Andre j. Niestroj, Kathrin Zunkel, Hans-Ulrich Demuth, J. Med. Chem. 2006, 49 (2), 664-677

[3] Probing Secondary Glutaminyl Cyclase (QC) Inhibitor Interactions Applying an in silico-Modeling/Site-Directed Mutagenesis Approach: Implications for Drug Development. Birgit Koch, Mirko Buchholz, Michael Wermann, Ulrich Heiser, Stephan Schilling and Hans-Ulrich Demuth, Chem Biol Drug Des. 2012, 80(6):937-46