





N. Budisa

Date of birth: November 21, 1966

Position: Professor of Biocatalysis, Technische Universität Berlin

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Education: 1993 MSc (molecular biology and molecular biophysics), Zagreb University

1997 PhD supervised by Robert Huber, Max Planck Institute (MPI) of Biochemistry,

Martinsried, and Technische Universität München (TUM)

2001-2005 Habilitation in biochemistry, MPI of Biochemistry and TUM

Nediljko (Ned) Budisa

Awards: 2004 BioFuture Award

Research: Biochemistry, biophysics, genetic-code engineering, synthetic biology, xenobiology

Hobbies: Boxing, history, onomastics, philosophy, religion

The author presented on this page has recently published his **10th article** in Angewandte Chemie in the last 10 years:

"Biocatalysis with Unnatural Amino Acids: Enzymology Meets Xenobiology": F. Agostini, J.-S. Völler, B. Koksch, C. G. Acevedo-Rocha, V. Kubyshkin, N. Budisa, Angew. Chem. Int. Ed. 2017, 56, 9680; Angew. Chem. 2017, 129, 9810.

My science heroes are Oswald T. Avery, Erwin Chargaff, and Edward O. Wilson.

If I had one year of paid leave I would follow the path of St. Paul's missionary journeys.

The principal aspect of my personality is a noble character mixed with stubbornness.

My favorite scientific author is Charles Darwin.

My favorite painter is Jean-François Millet.

My favorite book is The Idiot by Fyodor M. Dostoyevsky.

The natural talent I would like to be gifted with is to run faster than Usain Bolt and to punch better than Muhammad Ali.

The greatest scientific advance of the last decade was the emergence of xenobiology.

Young people should study chemistry because biology is too important to be left to biologists only.

The most significant scientific event of the past 100 years was the discovery of DNA as the hereditary material.

I admire principled, reliable, and modest people.

I advise my students to listen to Sting: "it takes a man to suffer ignorance and smile; be yourself no matter what they say".

My favorite way to spend a holiday is to visit the places that have witnessed many historical events with a great global impact.

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The work of N. Budisa has been featured on the inside cover of Angewandte Chemie:

"Chemical Evolution of a Bacterial Proteome": M. G. Hoesl et al., Angew. Chem. Int. Ed. 2015, 54, 10030; Angew. Chem. 2015, 127, 10168.

My 5 top papers:

- "In Vivo Double and Triple Labeling of Proteins Using Synthetic Amino Acids": S. Lepthien, L. Merkel, N Budisa, Angew. Chem. Int. Ed. 2010, 49, 5446; Angew. Chem. 2010, 122, 5576. (In vivo simultaneous incorporation of three chemically distinct noncanonical amino acids.)
- "Design of anti- and pro-aggregation variants to assess
 the effects of methionine oxidation in human prion
 protein": C. Wolschner, A. Giese, H. Kretzschmar, R.
 Huber, L. Moroder, N. Budisa, *Proc. Natl. Acad. Sci.*USA 2009, 106, 7756. (Discovery and engineering of
 a chemical model for understanding of the role of
 methionine oxidation in prion protein aggregation.)
- "Synthetic Biology of Proteins: Tuning GFPs Folding and Stability with Fluoroproline": T. Steiner, P. Hess, J. H. Bae, B. Wiltschi, L. Moroder, N. Budisa, PLo-SONE 2008, 3, e1680. (The roles of proline side-chain

- conformations in translation, folding and stability of proteins.)
- 4. "Expansion of the Genetic Code Enables Design of a Novel "Gold" Class of Green Fluorescent Proteins": J. H. Bae et al., J. Mol. Biol. 2003, 328, 1071. (Discovery and engineering of "gold" fluorescence and establishment of green-fluorescent protein as a model for expanded genetic-code studies.)
- 5. "Residue-specific bioincorporation of non-natural biologically active amino acids into proteins as possible drug carriers: Structure and stability of the *per*-thiaproline mutant of annexin V": N. Budisa, C. Minks, F. J. Medrano, J. Lutz, R. Huber, L. Moroder, *Proc. Natl. Acad. Sci. USA* 1998, 95, 455. (Discovery and establishment of the therapeutic potential of proteins with noncanonical amino acids.)

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