DR. CLAUDIO DALVIT

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INVITED BY

SOSCO LABORATORY

SELECTIVE ORGANIC SYNTHESIS AND BIOORGANIC CHEMISTRY

Claudio Dalvit studied biophysics at the University of Trento, Italy, and trained at the Carnegie-Mellon University, USA, The Scripps Research Institute, USA, and the University of Lausanne, Switzerland. He joined Sandoz (now Novartis), Switzerland in 1989 as lab head prior to his position in 1999 as head of the biomolecular NMR group at Pharmacia & Upjohn, Italy and then senior scientist in the Drug Discovery & Development Department of the Italian Institute of Technology. He joined the University of Neuchâtel, Switzerland in 2011 as NMR specialist in the SAF unit of the Institut de Chimie. His research interests are in NMR spectroscopy, from methodology development to its applications in chemistry and biology, fluorine chemistry, fragment-based drug discovery and enzymology. He is the recipient of the 2006 Gold Medal of the Italian society of magnetic resonance.

EXPERTISE

NMR spectroscopy, NMR structure elucidation of small molecules and natural products, NMR of biofluids, 3D NMR structure determination of peptides and small proteins, fragment based drug discovery, biophysical techniques applied to screening, assay development, enzymology, Isothermal Titration Calorimetry (ITC), protein-ligand and protein-protein interaction studies.

EDUCATION

- Scientific Liceum at the Galileo Galilei Institute of Trento.
- Università degli Studi di Trento (Italy).
- Doctoral degree in Physics with Thesis in Biophysics at the Università.
- Degli Studi di Trento (Italy) in 1981 with 110/110 Summa cum Laude.

SELECTED PUBLICATIONS OVER THE LAST FOUR YEARS

- C. Dalvit, *"NMR methods in fragment screening: Theory and a comparison with other biophysical techniques"*, Drug Discovery Today 14, 1051-1057, (2009).
- A. Vulpetti, U. Hommel, G. Landrum, R.Lewis and C. Dalvit, *"Design and NMR-based screening of LEF, a library of chemical fragments with different local environment of fluorine"*, J. Am. Chem. Soc. 131, 12949-12959, (2009).
- A. Vulpetti, N. Schiering and C. Dalvit, "*Combined use of computational chemistry, NMR screening and X-Ray crystallography for identification and characterization of fluorophilic protein environments*", PROTEINS: Structure, Function and Bioinformatics 78,3281–3291, (2010) .
- C. Dalvit and A. Vulpetti, "*Fluorine-protein interactions and 19F NMR isotropic chemical shifts: An empirical correlation with implications for drug design*", ChemMedChem 6, 104-114, (2011).
- C. Dalvit and A. Vulpetti, "*Intermolecular and intramolecular hydrogen bonds involving fluorine atoms: implications for recognition, selectivity and chemical properties*" ChemMedChem 7, 262-272, (2012).
- A. Vulpetti and C. Dalvit, "*Fluorine local environment: From screening to drug design*" Drug Discovery Today 17, 890-897 (2012).
- C. Dalvit and A. Vulpetti, *"Technical and Practical Aspects of 19F NMR-based Screening: Toward Sensitive High-Throughput Screening with Rapid Deconvolution*" Magnetic Resonance in Chemistry 50, 592-597 (2012).