

Diether J. Recktenwald, PhD;
Principal, Desatoya LLC; retired VP Adv.Tech., BD Biosciences
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Years of Professional Experience: >40

Education: Ph.D., Biology, University Bochum, Germany, 1978; M.S., Chemistry, University Saarbruecken, Germany, 1975; B.S., Chemistry, University Saarbruecken, Germany, 1972

Special training:

- Postdoc Stanford University, Struct. Biol. 1979 Cell Biology/Chem.
- Postdoc Stanford University, Physical Chem. 1980 Biophysics
- Mass spectrometry of gases, ^{31}P NMR of products of phosphate condensation (MS thesis)
- Isolation of enzymes from yeast, protein purification, laser excited fluorescence analysis of enzyme kinetics down to microsecond resolution, computer modeling of enzyme reactions (Ph.D. thesis),
- Synthesis of small peptides by solution and surface chemistry, ESR-based analysis of phase diagrams of phospholipid mixtures (Postdoc at Stanford),
- Cell analysis (cytometry) instrumentation, microscopic image analysis, immunofluorescence based cell assays, analysis methods for extremely rare cell analysis, cell sample preparation, fluorescence quantitation, single fluorescent molecule detection, technology evaluation (Becton Dickinson), technology transfer, product development process.
- GMP and GLP methods for the development of clinical diagnostic and therapeutic devices, cell separation and isolation methods especially immuno-magnetic cell separation, intellectual property assessment, and technology evaluation (AmCell Corp., BD Biosciences)

Through Desatoya LLC Dr. Recktenwald currently supports academic and industrial teams with his expertise in technology transfer in the field of cytometry e.g. his work to help with the ISAC CYTO Innovation initiative and as member of several scientific advisory boards.

He worked until October of 2012 as Vice President of Advanced Technology on the identification and evaluation of novel technologies for new cell analysis products at BD Biosciences e.g. fluorescent polymer dyes. He has many years of experience in technology and product development. Starting in 1981, his group at BD developed the technology for multi-color fluorescence reagent-, instrument- and software-systems for flow cytometry. In 1993 fluorescence detection with single molecule sensitivity was demonstrated by his group using CCD based fluorescence microscopy. As VP R&D of AmCell Corporation from 1994 to 1998, in collaboration with Amgen (now Miltenyi Biotec), he was responsible for leading the development and documentation of the CliniMACS™ system for hematopoietic progenitor cell purification for cell therapy with regulatory clearance in Europe and the US. The system is based on immuno-magnetic cell selection. It was introduced into European oncology use in 1997. Dr. Recktenwald and his AmCell team also investigated several applications of immuno-magnetic cell enrichment to increase the sensitivity for the detection of rare cells. As Director of Industrial and Environmental Bioscience at BD from 1999 to 2001, Dr. Recktenwald was responsible for assessing and developing novel flow cytometric detection methods for microorganisms. As VP R&D for BD Biosciences Immunocytometry Systems from 2002 to 2004, he led the completion of the development of several new flow cytometry systems (i.e FACS Aria, FACS Array, LSR-II, FACSCanto) and accessories (i.e SPA, LWA). In 2004 he was appointed VP Advanced Technology for BD Biosciences to identify relevant technologies and to integrate them to grow the Biosciences business. Dr. Recktenwald is a BD fellow emeritus and recipient of the 2017 ISAC Distinguished Service Award.

Publications ([Google Scholar link](#))([ResearchGate link](#)) ([Presentations](#)) [US patents](#)