

PIERRE MONSAN TO RECEIVE THE 2017 ENZYME ENGINEERING AWARD



Since 1983 the Enzyme Engineering Award has been presented at ECI's biennial International Enzyme Engineering Conference. The 2017 Award will be presented at the 24th Enzyme Engineering Conference in Toulouse, France. This award recognizes outstanding achievement in the field of enzyme engineering, through basic or applied research in academia or industry.

The 2017 Enzyme Engineering Award, presented in the name of Engineering Conferences International and Genencor, will be awarded to **Professor Pierre Monsan**.

Professor Pierre Monsan earned his engineering degree in Biological Chemistry (1969) from the National Institute for Applied Sciences (INSA), University of Toulouse, France, as well as his Doctor-Engineer Degree (1971) and his PhD degree (1977). He obtained a Lecturer position in the Department of Biochemical Engineering at INSA in 1969, and was promoted Assistant Professor in 1973 and Full Professor in 1981.

He founded one of the very first French start-up companies, BioEurope, focusing on the field of Biocatalysis in 1984. In 1993, BioEurope merged with the Solabia Group. He returned to INSA to create the Gilbert Durand Bioengineering Center and to start a new research group focusing on enzyme molecular engineering with Prof. Magali Remaud-Simeon. He was appointed Professor at Ecole des Mines Paris in 1993. He was involved in the creation of BioTrade in 1996 and of GeniBio in 1998. From 1999 to 2004 he headed the Department of Biochemical Engineering at INSA. He was elected member of the French University Institute (IUF) in 2003 and re-elected in 2008. He founded Toulouse White Biotechnology (TWB) in 2012 with a €20m grant from the French Government. He is presently Professor Emeritus at INSA and Director of TWB.

Professor Monsan has made many significant contributions to the field of enzyme engineering. His early work was on enzyme immobilization and enzyme reactor development. He elucidated the mechanism of action of glutaraldehyde, one of the most widely used reagents for enzyme covalent binding. In the late 70s, he was one of the very first researchers to use enzymes in non-aqueous

media to “transform” hydrolytic enzymes into synthetic enzymes for ester, amide and glycosidic linkage synthesis. His group at INSA has made very significant contributions to the field of glucansucrases, including:

- (i) the isolation of totally original genes which enable such enzymes to catalyze the synthesis of oligosaccharides, polysaccharides and glucoconjugates using the simple sucrose molecule as an α -D-glucosyl moiety donor,
- (ii) the deciphering of their molecular mechanism of action, demonstrating that the mechanism previously accepted was wrong,
- (iii) the molecular engineering of glucansucrases to create totally new regioselective synthetic pathways, and
- (iv) the application of these enzymes to the synthesis of prebiotic oligosaccharides (e.g., BioEcolia®, 200 t/y) for dermocosmetic use.

Professor Monsan is the author of more than 240 publications, 3 books and 65 patents. Also, he is Chairman of the French Federation of Biotechnology and a member of:

- the French Academy of Technology,
- the French Academy of Agriculture,
- the “College of Fellows” of the American Institute for Medical and Biological Engineering (AIMBE),
- the Executive Board of the European Federation of Biotechnology.

ENZYME ENGINEERING AWARDEES

with

a list of conference sites

1971 - Henniker, New Hampshire, USA

1973 - Henniker, New Hampshire, USA

1975 - Portland, Oregon, USA

1977 - Bad Neuenahr, Germany

1979 – Henniker, New Hampshire, USA

1981 – Kashikojima, Japan

1983 – White Haven, Pennsylvania, USA - **ICHIRO CHIBATA**

1985 – Helsingor, Denmark - **KLAUS MOSBACH**

1987 – Santa Barbara, California, USA - **EPHRIAM KATCHALSKI-KATZIR**

1989 – Kashikojima, Japan - **SABURO FUKUI**

1991 – Kona, Hawaii, USA - **ALEX KLIBANOV**

1993 – Deauville, France - **MALCOLM LILLY**

1995 – San Diego, California, USA - **MARIA-REGINA KULA** and **CHRISTIAN WANDREY**

1997 – Beijing, China - **HARVEY BLANCH**

1999 – Kona, Hawaii, USA - **CHI HUEY WONG**

2001 – Potsdam, Germany - **HIDEAKI YAMADA**

2003 – Santa Fe, New Mexico, USA - **JON DORDICK** and **DOUG CLARK**

2005 – Gyeongju, Korea - **DEWEY RYU**

2007 - Harrison Hot Springs, British Columbia, Canada - **FRANCES H. ARNOLD**

2009 – Groningen, The Netherlands - **SAKAYU SHIMIZU**

2011 – Vail, Colorado, USA – **DAVID ESTELL**

2013 – Toyama, Japan – **YASUHISA ASANO**

2015 – St. Petersburg, Florida, USA – **DAN TAWFIK**

2017 – Toulouse, France – **PIERRE MONSAN**