



**Prof. Dr. Marek Cyprian Chmielewski**

## CURRICULUM VITAE

**Born:** Sept. 26, 1942, Lipnica Dolna, POLAND

**M.Sc.:** Warsaw University of Technology - 1965

**Ph. D.:** Institute of Organic Chemistry of the Polish Academy of Sciences – 1972, under supervision of prof. A. Zamojski; “Total synthesis of methyl pentopyranosides”

**D.Sc.:** (Habilitation) Institute of Organic Chemistry of the Polish Academy of Sciences - 1981; “Synthesis of deoxysugars and aminodeoxysugars from butyl (E)-2-hydroxy-6-oxo-hex-4-enoate”

**Associate Professor:** 1984

**Professor:** 1991

since 2002 Corresponding Member of the Polish Academy of Sciences

**Postdoctoral:**

1973-1974 Purdue University, West Lafayette (Prof. R.L. Whistler)

**Research associate:**

1980-1981 Southern Illinois University, Carbondale (Prof. J.N. BeMiller)

**Employment record:**

1965-1968 Warsaw University of Technology, teaching assistant

since 1969 associated with the Institute of Organic Chemistry of the Polish Academy of Sciences, Warsaw

1987-2004 Research Director of the Institute of Organic Chemistry of the Polish Acad. Sci.

1992-2006 Deputy Chairman of the Division of Mathematics, Physics and Chemistry of the Polish Acad. Sci.

2007-2010 Member of the Council of National Center for Research and Development

1994-2009 Member of the Commission of Scientific Awards of the Prime Minister of Poland

2004-2011 Director of the Institute of Organic Chemistry of the Polish Acad. Sci.

2007-2011 Chairman of the Council of Directors of Scientific Institution of the Polish Acad. Sci.

2011-2014 Vice-President of the Polish Academy of Sciences

**International stays:**

1988 and 1990 Visiting Professor in Whistler Center for Carbohydrate Research, Purdue University

1992 Visiting Professor, Sevilla University

1999 JSPS fellow, Japan

2003 Royal Society Journals Grant for visitors, United Kingdom

2005 Academia dei Lincei Visitors Grant, Italy

**Membership of advisory boards of Journals, past and present:**

J. Chem. Soc., Chem. Commun.; J. Carbohydr. Chem.;

Carbohydr. Res.; Carbohydr. Letters; Indian J. Chem.; ARKIVOC

**Membership of international scientific bodies and chemical societies:**

past COST Management Committee D-2 section;

Member of Scientific Committee of ESOC

present Representative of Poland to European Carbohydrate Organization;

Member of the Polish Chemical Society;

Member of the American Chemical Society

**Current positions:**

Professor in the Institute of Organic Chemistry of the Polish Academy of Sciences

**Publications:**

250 scientific papers

**Awards:**

Kostanecki Medal of the Polish Chemical Society, 1995

M. Sklodowska-Curie Award of the Polish Academy of Sciences, 1998

Société Chimique de France, French-Polish Prize, 2009

Knight Cross of Polonia Restituta, 2002

Medal of National Education, 2004

**Research interest:**

Stereoselective synthesis

Carbohydrate synthesis and transformations

Synthesis of  $\beta$ -lactam antibiotics

Solid-phase organic synthesis

**Current research activities involve:**

The major research interest includes stereocontrolled syntheses of oxa- and carba-penamams and cephamams. Particular attention is directed to stereoselectivity of the [2+2]cycloaddition of chlorosulfonyl isocyanate to chiral vinyl ethers and alkoxyallenes derived from sugars. The other  $\beta$ -lactam projects are directed to application of readily available 4-vinyloxy-azetidin-2-one as  $\beta$ -lactam building block and to application of "Kinugasa reaction" (copper catalyzed cycloaddition of nitrones to terminal acetylenes) for stereocontrolled synthesis of carbapenamams.

The other current interest includes 1,3-dipolar cycloaddition of nitrones to unsaturated sugar 1,4- and 1,5-lactones with the intention to find an attractive entry to iminosugars. Particular attention is paid to stereochemical pathway of the cycloaddition and to stereocontrol of the synthesis.

There is also the third project which involves synthesis of glycosyl hydroperoxides and bis-glycosyl peroxides. The special attention is directed to the use of hydroperoxides as chiral epoxidation reagents and potential biologically active compounds.

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