CV. Information: Kjell Undheim

Academic positions:

Professor in organic chemistry, Department of Chemistry, University of Oslo (UiO), 1973-2001. Professor emeritus 2002 -

Professor of Organic Pharmaceutical Chemistry, Institute of Pharmacy, UiO, 1971-1972.

Associate Professor in organic chemistry, Department of Chemistry, UiO, 1965-1970.

Degrees:

B. Sc. Tech Applied Biochemistry, University of Manchester, UK., 1956.

D.Sc. (Doctor of Science, UK)

Dr. philos, (UiO)

Ph.D. (Doctor of Philosophy, UK)

Honorary Membership:

Member of the Norwegian Academy of Technical Sciences.

Honours:

Honorary Conference: "Kjell Undheim Symposium in Organic Chemistry" arranged at University of Oslo 1-2 November 2001 (The first international symposium in synthetic organic chemistry to be held in this country).

Academic institutions:

Postdoctor, Stanford University, California, 1959-1960.

Sabbatical at University of Wisconsin, USA; at University of Tokyo, Japan; at Australian National University, Canberra, Australia.

Special appointments:

Member of The Board at Sentralinstitutt for Industrial Research (SI; SINTEF, Oslo) 1973-79.

Member of Chemical/Processchemical committee in NTNF, 1979-198?

Industrial research:

Research positions in industry include positions as Senior research scientist, Director of research, Consltant: Geigy Pharmaceuticals (Novartis), New York, USA; Astra (AstraZenica), Sweden; Nycomed, Oslo; Pharmaceutical Founder companies, Oslo.

Most recent Research areas:

(i) Catalytic organometallic reactions in stereoselective syntheses (Pd, Rh, Ru).

(ii) Medicinal Chemistry: Semisyntheses of antimicrobial macrolides (Erythromycin family), messenger cyclic nucleotides (cAMP analogues; HIV, cancer)

(iii) Organometallics in the syntheses of novel heterocyclic systems.

Publications:

Author or coauthor of some *380 scientific publications* including some patent applications.

A selection of 10 recent publications is given below:

1. Heteroaromatics via palladium-catalyzed cross-coupling. A review on palladium-catalyzed cross-coupling for synthesis of aromatic heterocyclic compounds, including five-, six-membered and fused ring systems.
   Undheim, K. *Handbook of Organopalladium Chemistry for Organic Synthesis* **2002**, *Vol. 1*, 409-492. Ed. by Negishi, Ei-i.

2. The Schoellkopf chiron and transition metal mediated reactions, a powerful combination for stereoselective construction of cyclic α-quaternary-α-amino acid derivatives
   Undheim, K. *Amino Acids* **2008**, *34*(3), 357-402

3. Stereoselective preparation of (R_P)-8-heteroaryladenosine-3',5'-cyclic phosphorothioic acids.

Andrei, M.; Bjornstad, V.; Langli, G.; Romming, C.; Klaveness, J.; Tasken, K.; Undheim, K. *Organic & Biomolecular Chemistry* **2007**, *5*(13), 2070-2080.

4. Process for the preparation of 8-carbyl substituted purine cyclic adenosine phosphorothioates (cAMPS) used in antiretroviral therapy as immunostimulants and antiviral agents

   Undheim, K.; Tasken, K.; Klaveness, J.; Langli, G.; Bjoernstad, V.

   PCT Int. Appl. **2005**, *WO* 2005123755. A2 20051229.

5. Chemoselective synthesis of erythromycin A ketolides substituted in the C10-methyl group

   Gunnes, S.; Undheim, K. *Bioorganic & Medicinal Chemistry* **2007**, *15*(1), 119-129

6. Preparation of cyclic 2',3'-carbamate derivatives of erythromycin macrolide antibiotics.

   Heggelund, A.; Undheim, K. *Bioorganic & Medicinal Chemistry* **2007**, *15*(9), 3266-3277.

7. A stereoselective synthesis of a spiro-bridged bis(α-amino acid) derivative based on Ru(II)-catalyzed RCM reactions

   Andrei, M.; Efskind, J.; Undheim, K. *Tetrahedron* **2007**, *63*(20), 4347-4355.

8. Rh(II)-carbenoid insertion into chiron substrates for stereoselective amino acid construction

   Andrei, M.; Roemming, C.; Undheim, K. *Tetrahedron: Asymmetry* **2004**, *15*(17), 2711-2717.

9. Stereocontrolled construction of conformationally constrained and rigid bis(α-amino acid) derivatives. (A review).

   Undheim, K.; Efskind, J.; Hoven, G. B. *Pure and Applied Chemistry* **2003**, 75(2-3, 279-292.

10. Rhodium(II)-carbenoid C-H insertion reactions in the synthesis of α,β'-dioxospirane systems

    Aburel, P. S.; Romming, C.; Undheim, K. *Journal of the Chemical Society, Perkin Transactions 1* **2001**, (9), 1024-1029.