SISF-SCS Senior Investigator Award Lecture 2017/II: Vitamins and Nutraceuticals from the Perspective of Process Research

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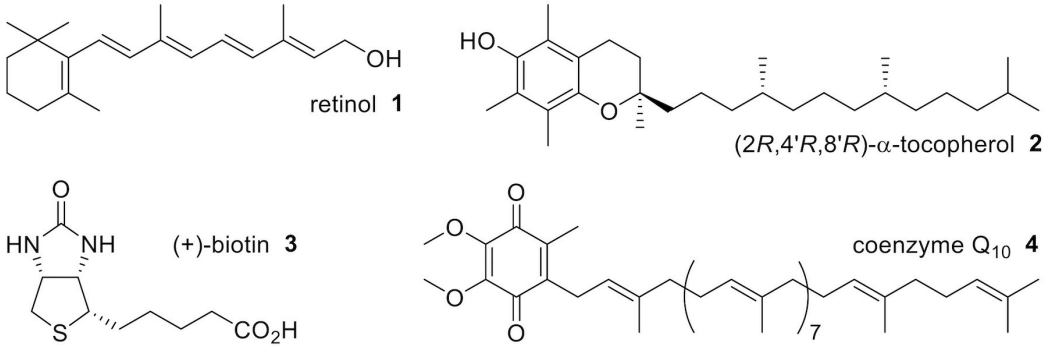
The development of efficient, sustainable low-cost processes is the basis for providing high-quality products for daily life applications in human and animal nutrition1. The importance of chemical process research towards ecologically benign and competitively advantageous processes for the large-scale preparation of various vitamins, nutraceuticals and fine chemicals is highlighted.



Representative examples from the field of naturally occurring food supplements such as vitamin A (retinol, **1**), vitamin E (tocopherols, e.g. **2**)[2-4], vitamin K_1 (phylloquinone), d-(+)-biotin (vitamin H, **3**)[5], or ubiquinones (e.g. coenzyme Q_{10}, **4**) will be given, including contributions from collaborations with external partners. General trends include the shift from stoichiometric to catalytic protocols and from batch to continuous processes. In addition, the use of renewable (bio-based) raw materials as key building blocks for the production of vitamins is of growing importance.

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