

The Doctoral Program **ION CHANNELS AND TRANSPORTERS AS MOLECULAR DRUG TARGETS** („MolTag“) is pleased to invite you to the following lecture

**COMPLEX NATURAL PRODUCTS AS TOOL TO EXPLORE  
CANCER PROGRESSION AND CELL MOTILITY**

**by Prof.Dr. Cristina NEVADO**

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<https://www.chem.uzh.ch/en/research/groups/nevado.html>; <http://www.nevadogroup.com/>

**on: Friday, June 7th 2019, 03:15pm (15:15)**

**at: TU Wien, Getreidemarkt 9, Building BA (Chemistry), Lecture Hall: GM5 Praktikum-HS**



**ABSTRACT:** Small molecules that target the actin cytoskeleton have long been recognized as valuable molecular probes and pharmaceutical agents. We have investigated the cellular targets of iriomoteolide-3a and a collection of related macrolide analogues. A new approach for their synthesis has enabled scaffold-diversification and solved the supply problem. Structure-activity relationships suggest that actin is one of iriomoteolides' primary cellular targets – according to their inhibition of cell migration, induction of morphological changes, reversible cytoplasmic retraction and reduction of F-actin fibers in a time and dose dependent manner. These results showcase iriomoteolides as novel and easily tunable chemical probes for the in vitro study of actin dynamics in the context of cell motility processes including cell invasion and division.

**RESEARCH EXPERIENCE:** Cristina Nevado graduated in Chemistry at the Autónoma University of Madrid in 2000. In October 2004 she received her PhD in organic chemistry from the same University working with Prof. Antonio M. Echavarren in late transition metal catalyzed reactions. After a post-doc stay in the group of Prof. Alois Fürstner at the Max-Planck-Institut für Kohlenforschung (Germany), she joined the University of Zurich as an Assistant Professor in May 2007. In 2011, Cristina was awarded the recognition of her contributions to the field of synthetic organic chemistry. In 2012 she received an ERC Junior Investigator grant and has been awarded the Werner Prize of the Swiss Chemical Society. In 2013 she became Full Professor at the Organic Chemistry Institute of the University of Zurich. Rooted in the wide area of organic chemistry, her research program is focused on complex chemical synthesis and new organometallic reactions.