

PROFILE: MARCO BAGGIOLINI

## Riding Off Into an Alpine Sunset—Or Sunrise

Marco Baggiolini, a leading chemokine scientist, is leaving his institute with the hopes of turning an obscure Swiss region into an academic attraction

**BELLINZONA, SWITZERLAND**—During the Renaissance, a trio of castles looming above this city guarded three alpine crossroads connecting Milan with northern Europe. Today, Marco Baggiolini is hoping to transform his scenic but sleepy hometown and its Italianate environs into a different sort of crossroads: one that connects Swiss and Italian higher education. It's a formidable undertaking, as the region is far removed—not so much in distance as in intellectual firepower—from Europe's traditional academic bastions.

For the cosmopolitan immunologist, embarking on this quest has involved a difficult scientific sacrifice: retiring from a major institute in Bern to devote his golden years to the fledgling University of Italian-speaking Switzerland (USI), also called the University of Lugano. "Instead of relying entirely on the big universities in northern Italy and the rest of Switzerland," Baggiolini says, "we are starting to build our own system. It's a tremendous challenge."

Baggiolini, 65, made his name by unraveling some of the fundamental properties of chemokines, proteins that help the body mediate immune responses by coaxing neutrophils and other white blood cells to a site of inflammation or infection. The work established him as "a dominant and driving force in the field of chemokine biology," says Steve L. Kunkel of the University of Michigan, Ann Arbor. Baggiolini has also explored a range of other facets of leukocyte immunology. "Rarely," says Kunkel, "is one scientist so accomplished in diverse areas."

Now Baggiolini is hoping to turn the Italian-speaking Swiss canton of Ticino into an academic attraction. After 18 years as director of the University of Bern's Theodor Kocher Institute, Baggiolini is retiring this month to devote all his energies to USI. He helped build USI from scratch starting in 1996 and, with like-minded scientists and local officials, wooed two research centers to Ticino: the privately funded Institute for Research in Biomedicine in Bellinzona and the Swiss Center for Scientific Computing, part of Zürich's renowned Swiss Federal Institute of Technology (ETH) in Manno. Both have attracted topflight directors: immunologist

Antonio Lanzavecchia, from the former Basel Institute for Immunology, will head the biomedical institute, while the computer center is led by physicist Michele Parrinello, co-developer of the Carr-Parrinello method for analyzing electron systems and until recently director of the Max Planck Institute for Solid State Research in Stuttgart. "After so many



**Powerhouses.** Marco Baggiolini hopes to put the University of Italian-speaking Switzerland on the academic map.

years in the shadows," says Baggiolini, "Ticino is starting to attract top people."

### Immune to failure

Baggiolini started out as a postdoc at Rockefeller University in New York City before spending a dozen years in Basel as a lab chief at the pharmaceutical firm Sandoz, which has since merged into Novartis. He returned to academia in 1983 to direct the Kocher. There, he played a crucial role in the landmark 1987 discovery of interleukin-8 (IL-8), found independently that year by a team at the U.S. National Institutes of Health (NIH). IL-8 "helped answer a century-old question of how neutrophils are selectively recruited to sites of acute infection and inflammation," says NIH's Phil Murphy. More broadly, the discovery foretold the master role that chemokines are now known to play in both innate and adaptive immune responses.



At the Kocher Institute, Baggiolini and his team, working in a relaxed atmosphere characterized by 18th century oil paintings on his office walls and Verdi operas echoing through his lab, had a hand in identifying several of the 50 or so known chemokines, determining cell targets, signaling pathways, and disease associations. "Others have stood on his shoulders to discover major and unsuspected functions of chemokines," says Murphy, who notes that Baggiolini's work spurred drug programs based on chemokine and chemokine receptor targets against diseases such as AIDS, asthma, and multiple sclerosis. "Like all great scientists," says Murphy, Baggiolini "has a knack for focusing on key questions at the right time."

But his most pressing questions are no longer scientific. Standing on the roof of a former hospital in Lugano, where USI's faculties of economics and communication science are housed, Baggiolini—his conversation peppered with Italian, French, English, and German phrases—gestures toward a busy construction site on the campus of USI, which hopes to double its student body (now 1800) over the next few years. Ironically, the immunologist is not trying to establish a natural sciences campus, partly because the university lacks the resources to outfit labs that could compete with those at major research centers.

Instead of the typical rigid Swiss bureaucracy, Baggiolini has implemented a U.S.-style flexibility. Professors are hired on 4-year renewable contracts, students are charged a modest tuition—instead of virtually nothing, as at other Swiss public universities—and the degrees parallel the U.S. bachelor's and master's degrees. Nevertheless, some Swiss academics are skeptical that USI will make it into the top ranks of Switzerland's universities. As one skeptic predicts, "Attracting topflight students from elsewhere will be tough."

It will take determination to prevail against such attitudes. Baggiolini has the right stuff, his admirers insist. He's "an inspired leader," says mathematician Hans Buehlmann, a former president of ETH Zürich. His "diplomatic skills are the prime reason for the excellent atmosphere and the spirit of pioneering which one encounters everywhere in the young university."

Asked if he is hanging up his lab coat for good, Baggiolini smiles. He enjoys his new career as an administrator, he says, "but I enjoy my research, too, and I don't plan to give it up." A couple of his research groups from Bern have set up shop in Lanzavecchia's institute. Baggiolini plans to spend some of his spare hours there, he says, just a few blocks from where he was born. —ROBERT KOENIG