

Today we are in mourning.

We, of course, are Amos's family and close relatives. But we, too, are his colleagues and former colleagues at SIB and the University.

And we, also, are the entire global scientific community. One need only look at the hundreds of heartfelt messages from around the world, on social media or by email, to gauge how deeply Amos's passing has affected the entire scientific world.

I will, of course, evoke Amos' exceptional career. But more importantly, I would like to share my personal perspective: what I saw of him on a daily basis, in his way of working, thinking, and being. Because although we never collaborated on a purely scientific project, our relationship was constant, deep, and often daily for 35 years.

We already knew each other when he was studying biochemistry and I was studying computer science. We met in a student association, without imagining that our professional paths would eventually converge.

Amos thus studied biochemistry at the University of Geneva. As I recall, the reason for this choice was precisely because he thought that this discipline would one day enable him to study extraterrestrial life.

In 1986, after graduating, Amos began a PhD in mass spectrometry with Robin Offord, for whom he was the first doctoral student and who would remain his mentor long after his thesis was completed. But the spectrometer he was supposed to use was broken. So, while waiting for it to be repaired, Amos set about transcribing and annotating, on his computer, the few proteins that were listed in an atlas published in the form of a book. This is how Swiss-Prot was born. In the end, he never used the spectrometer: his thesis became Swiss-Prot itself. This database, which had a few hundred entries when it started, now contains more than half a million and has been consulted by millions of researchers.

During his thesis, he also developed PC/Gene, a pioneering software program that was commercialized in Switzerland and then in the United States. Thanks to the royalties, he was even able to hire up to four people to work with him on Swiss-Prot.

Amos then created PROSITE, ENZYME, and SeqAnalRef, which, together with Swiss-Prot, laid the foundations for modern bioinformatics: reliable, structured, annotated, and shared data. He was well ahead of his time.

In 1990, when we had lost touch somewhat, Denis Hochstrasser arrived at my office one day with Amos. And naturally, we started working together. First on a server providing access to protein analysis tools, then, in July 1993, on the ExPASy web server. ExPASy was the very first website dedicated to life sciences, at a time when there were only 150 websites in the world, all fields combined. Since then, it has been visited billions of times.

Amos's work was visionary — too visionary, at times — and therefore unsettling for the academic establishment. I will cite just two episodes:

- When we launched ExPASy, the director of IT services where the server was located threatened to unplug it, claiming that the web, **the web**, was useless and had no future.
- And when SIB was created, people within the University itself did everything they could to prevent us from doing so.

While Amos is primarily known as an exceptional scientist, his role in education deserves to be highlighted. I will simply mention the creation, in 1996, of the first DEA (postgraduate diploma) in bioinformatics in Switzerland. But he has been heavily involved in teaching and mentoring throughout his career.

The third aspect of his professional life was entrepreneurship. The Swiss-Prot funding crisis in 1996 was a turning point: with the European Union refusing funding because of the word “**Swiss**” in Swiss-Prot, Amos posted a desperate message on ExPASy. Thousands of messages of support poured in from around the world — Indian researchers even offered to organize a fundraising campaign.

This is what led us, along with a few colleagues, to create the SIB. At the same time, we founded the company GeneBio, then, in 2000, Amos co-founded GeneProt. In 2009, he left Swiss-Prot to create neXtProt with Lydie Lane. And in recent years, he devoted all his energy to Cellosaurus, a database on cell lines.

... I would also like to mention Amos' personality and how it influenced his professional circle.

First, there was his incredible **memory**. Denis used to say of him: “*The man with 60,000 proteins in his head*” (that was 20 years ago). Indeed, you could give him any protein name and he would recite everything in Swiss-Prot from memory.

There was also his **loyalty** — to his colleagues, his loved ones, his city. During the Swiss-Prot crisis in 1996, he was offered millions to move Swiss-Prot to the United States. He refused. For Geneva. For his family.

And then there was his **integrity**: Amos' integrity went far beyond simple honesty. He never had a hidden agenda, he always said exactly what he thought, even if it was against his own interests, for example by giving arguments to the opposing party during negotiations. Or by suddenly announcing, in the middle of a SIB Foundation Council meeting, that we no longer had a quorum, when others had already noticed but had kept quiet so as not to invalidate the discussions and decisions. As Christophe said last night: *Sometimes, in a discussion, he could be brutally honest.*

His **enthusiasm** has already been mentioned. He would have fought to the end to defend his “babies”: Swiss-Prot, PROSITE, neXtProt, Cellosaurus. When he was convinced of something, nothing could stop him, and it was impossible to contradict him. And when he encountered the stupidity of his interlocutor, he would get angry. But I never heard him shout; he would become very tense, to the point of shaking.

This enthusiasm was also evident in his **ability to do two things at once**: constantly annotating while following discussions perfectly. Whether in a meeting, a conference, or on a train, he was annotating, annotating. Always. Except when eating... or skiing. I remember a meeting in New York at 9 p.m. local time, which was 3 a.m. in Geneva. Amos was participating remotely from Geneva. In the middle of the discussion, Robin asked him, “*Amos, what protein are you annotating?*” And of course, he answered immediately.

And he was also “*Amos, the man who shoots faster than his shadow.*” His **thoughts always moved faster than everyone else's**. Sometimes too fast: others couldn't keep up. Sometimes even his own words couldn't keep up with his thoughts, and he would only express a partial version of what he was thinking. This sometimes led him to **impatience**: he couldn't understand why others couldn't follow his train of thought at his pace.

And sometimes, he really did shoot faster than his shadow. When GeneBio was being set up, he asked my opinion on two candidates... but after having already given them his approval. And in 2006, when a Brazilian colleague suggested celebrating Swiss-Prot's 20th anniversary in Brazil, he immediately said “yes,” before even realizing the consequences. The entire Swiss-Prot team and guests had to be flown to Fortaleza in Brazil to celebrate **Swiss-Prot**. And we were forced, along with a few colleagues, to take Yodl lessons to bring a touch of Switzerland to the party. But the most striking example in

this category is probably when he decided to step down as head of Swiss-Prot after 23 years, leaving us just a few weeks to find a successor.

His **perfectionism** and **scientific rigor** were legendary. That's what made Swiss-Prot a global reference. But it also backfired on him: neXtProt was supposed to be commercialized; three years after the planned date, he still claimed it was “99.9% ready.”

And, of course, his sense of **humor**. He loved to laugh and make others laugh. SIB parties were never complete without one of Amos's PowerPoint presentations, which were always hilarious. And the laughter: we had so many good laughs. Perhaps the best ones were on the train ride from Bern to Geneva, on our way back from the Foundation Council meeting, watching “*Willi Waller 2006*.”

Despite all this, Amos remained **modest**. He knew exactly what he was worth, but he never changed. This summer, when he received the ISCB award, he simply introduced himself as a “*biocurator*,” proud to explain the qualities of this profession. And of course, he maintained his style of dress in all circumstances, even at a gala evening organized by the President of the State Council, where some of the ladies wore long dresses, Amos wore a T-shirt.

... Amos was always ahead of his time and was convinced that extraterrestrial life existed. I personally believe that he was actually able to see beyond our space-time continuum. I will conclude with a personal memory about this special ability. When our daughter was born, Amos and Martine came to visit us. Amos looked at our daughter, who was less than a week old, for a few seconds, then said, “*She will be lively, mischievous, and have a sense of humor.*” Martine then added, “*Amos does that with all babies. And he's never wrong.*”

... There you go, dear Amos. It took me almost a whole day to write these few words about you, which once again illustrates your speed and your way of working. Because I know that if the situation had been reversed, you would have written such a text at the last minute, on the train on your way here, as you always did, and that the 35-minute journey would have been more than enough time for you.