

# OBITUARY

## Andrea Tontini (1966-2012)

Andrea Tontini, a distinguished chemist, philosopher, and poet, passed away suddenly at the age of 46 on 28 March 2012. He was co-author of more than fifty publications and four world patents in the medicinal chemistry field, in particular with respect to molecules able to enhance the action of endocannabinoids, such as the pharmacological tool URB597, which shows an analgesic-like and antidepressant-like activity.

Andrea was a researcher and lecturer at the University of Urbino Carlo Bo, where he worked mainly with Andrea Duranti and Giorgio Tarzia. Shortly, they became a research group at the international forefront of medicinal chemistry development and also a high profile research group leading outstanding innovative chemical biology. He was a scientist committed to continuous reflection and improvement on the method and meaning of his investigation. In spite of this, as many researchers, he loved details and a more and more deep exploration of the immense complexity of the smallest parts of matter.

Andrea's inquiry in the philosophy of chemistry was not only an after dinner activity, but a professional one. In many wonderful epistemological papers (see references) he developed a complex analysis of scientific concepts. On the one hand, he emphasized the essential incompleteness of chemical knowledge. In particular, he underlined the immense complexity and extravagant beauty of natural products and the reactions used to produce them, which depends in a very fine-tuned way on the spatial structure of molecules. This consideration enabled him to establish a peaceful coexistence and collaboration between his scientific orientation and his strong religious sense. The analysis of particulars to arrive at a scientific generalization taught him that each molecule is a 'perfect' world and in a way mirrors the infinite richness of Creation. On the other hand, Andrea had a realist approach to science, even stronger than a Popperian attitude. He was against instrumentalism and maintained with very good arguments that in chemistry sometime even fallibilism fails. For instance, he often told us how it is nearly impossible to imagine in the future that the structure of the molecule of benzene will result different from the celebrated hexagonal ring proposed by Kekulé.

Back in the 16<sup>th</sup> century at the University of Urbino, Federico Comandino studied and taught: he established the first good Latin translation of Euclid and Archimedes, and in some way this was the beginning of the modern science based on interdisciplinarity. The University of Urbino Carlo Bo is today still committed to a scientific humanism program, a mission also carried out by *Hyle*. Andrea's absence will be an irreparable damage to this perspective.

## References

- Tontini, A.: 1999, 'Developmental Aspects of Contemporary Chemistry', *Hyle: International Journal for Philosophy of Chemistry*, **5**, 57-76.
- Tontini, A.: 2004, 'On the Limits of Chemical Knowledge', *Hyle: International Journal for Philosophy of Chemistry*, **10**, 23-46.
- Tontini, A.: 2008, 'La formula chimica di struttura: un problema per l'epistemologia popperiana?', *Isonomia* [online: <http://www.uniurb.it/Filosofia/isonomia/2008tontini.pdf>].

*Vincenzo Fano:*

*Department of Foundations of Sciences, University of Urbino, Via Timoteo Viti 10, I-61029 Urbino, Italy; vincenzo.fano@uniurb.it*