



Molecules of the Month

On April 1st, 2001, the German online news magazine "Der Spiegel" published the following headline: "Medical Researchers Stop Cancer Tumors without any Chemical or Radiation Therapy." So is there some truth in bioresonance or homeopathy? However, in the first paragraph comes disappointment: "New York. By the use of suitable molecules, researchers stopped the formation of new blood and lymph vessels in cancer tumors and hence their growth."

A bit of confusion persists: To stop a tumor, you need molecules, but they need not to be chemical—at least according to "Der Spiegel". Further information and education is required, not only on the web. One possibility is to present an interesting molecule on a monthly basis, to feature its structure, biological and physical properties. There are only a few sites on the web that deal with such information, while you find about 180000 sites on homeopathy. Maybe this is a sign of quality. In this review, we would like to introduce the two oldest and largest sites.

Before you start your visit to these sites, please make sure you have not only a common browser such as Netscape, Internet Explorer or Opera, but also additional programs on your computer, so-called plugins. These are little extra programs, such as Chime which may be downloaded for

free,^[1] necessary to display not just text but also molecule structures in three dimensions rather than as a flat and static picture. The structure is saved as cartesian coordinates and you can rotate the molecule and wander through its structure using the mouse or keyboard.

The site of the Department of Chemistry at Oxford University (Figure 1) is optically very appealing. Karl N. Harrison has continuously presented a molecule of the month (or a class thereof) since January 1996 at <http://www.ncl.ox.ac.uk/mom/>. The information presented is only a starting point, but it is actually fun to navigate through this world every month. If you think this is only a techies' gadget and not to be taken seriously, you should start at the page for October 1999. Beginning with everyday molecules from bath rooms or a cup of coffee, such as water and sodium salicylate in June 1996, you can advance via three-dimensional structures of vitamins in February 1997 into more complicated subjects: Viagra in May 1999 or Absinthe in January 1999.

Paul May of Bristol University and Henry Rzepa of Imperial College in London started a similar project in January 1996, which can be found at <http://www.bris.ac.uk/Depts/Chemistry/MOTM/motm.htm> (Figure 2). On this site, research groups—mostly from England—present a "molecule of the month". For example, you can find

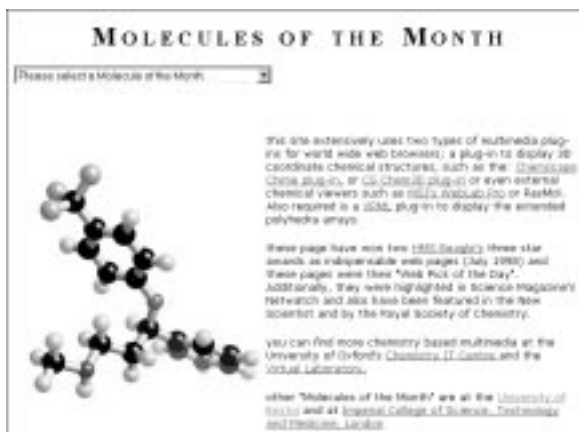


Figure 1. University of Oxford "Molecule of the Month" site



Figure 2. University of Bristol "Molecule of the Month" site

information about the steroid nandrolone, infamous for its use in athlete doping, on the October 2000 page. To wander through the three-dimensional structure, you need another plugin, a VRML (Virtual Reality Markup Language) viewer, which is also available for free.^[2,3]

Suggest a web site or submit a review:
angewandte@wiley-vch.de

After viewing so much information, you may want to relax on the web site "Molecules with Silly or Unusual Names" at <http://www.bris.ac.uk/Depts/Chemistry/MOTM/silly/sillymols.htm>, which is also maintained by Paul May and features compounds such as Angelic Acid and Bastardane.

Henning Hopf and Jörg Grunenberg
Technische Universität Braunschweig
(Germany)

- [1] <http://www.mdlchime.com/chime/>
- [2] Cortona VRML Client, www.parallelgraphics.com
- [3] Cosmo Player, www.cai.com/cosmo/

For further information visit:

<http://www.ncl.ox.ac.uk/mom/>
and
<http://www.bris.ac.uk/Depts/Chemistry/MOTM/motm.htm>