

# EUROPEAN NEWS

## Renewable and profitable?

While there is no doubt that renewable energies help combat climate change and to reduce dependency on fossil fuels, their economic interest is far from clear. Now, thanks to the Employ-RES study carried out jointly by six European institutes at the Commission's request, we have facts and figures on the impact of renewable energies on jobs and growth.



If Europe meets the target it has set itself, namely renewable energies representing 20% of final consumption by 2020, the sector will then generate, gross, 2.8 million new jobs and 1.1% added growth in the Community GDP. But if we look at the net figures, taking into account the increase in energy prices and the reduction in investments in the traditional energy sector, the ultimate result would be the creation of 410 000 jobs for an added growth of 0.24% of GDP. Although more modest, these figures seem to be the best we can hope for. The study concludes that action would be more rewarding

economically than inaction. Forecasts show that if we do not step up the effort, present policies – which would permit no more than 14% energy savings by 2020 – would provide less in terms of jobs and growth, whatever the model of analysis and scenario envisaged.

<http://ec.europa.eu/energy/renewables/>

## BIOTRACER 1 – Salmonella 0

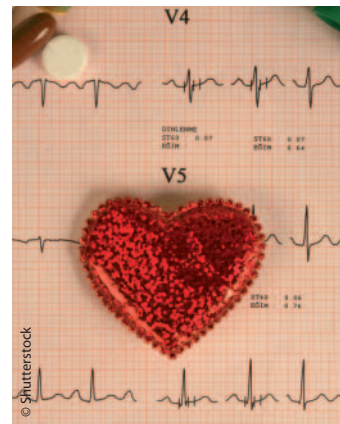
The principal culprit in gastroenteritis has lost a major battle. A team of researchers from the BIOTRACER network has developed a process for quantifying salmonella in pork. To date, all such attempts had come up against the same obstacle. As the bacteria are generally present in low quantities in food, the samples are first of all enriched to facilitate detection. But this process renders quantification difficult.

The new method is still based on an enrichment phase, followed by an amplification of the bacterial DNA by PCR (polymerase chain reaction) in real time, but this initial phase has been reduced. Researchers observed that there



is a precise correlation between the quantity of salmonella contained in the basic sample and the PCR signal, provided the enrichment period is limited to the exponential growth phase of the salmonella. By permitting the simultaneous analysis of several samples, this process opens the door to compiling a new quantitative database, one that is necessary in the field of risk analysis and controlling critical points, an area hitherto impossible.

[www.biotracer.org](http://www.biotracer.org)



## A new lease of life for the heart

Stem cells obtained from bone marrow and adipose tissue could improve the cardiac function after a heart attack, according to studies carried out by scientists at the Centre for Applied Medical Research and Navarre University Hospital (ES).

Cardiac arrest is one of the most common complaints in the world. When a person suffers such an attack the damaged muscular tissue dies and the residual scar tissue does not retract. As a result, the myocardium is unable to regenerate, with serious consequences for the workings of the

heart, possibly ultimately leading to cardiac insufficiency. Experiments carried out on rats showed that stem cells obtained from bone marrow were able to repair the damaged tissue while the adipose cells were transformed to form blood vessels and cardiac cells. What is more, the results obtained were maintained over a long period, stressed Manuel Mazo, who headed the study.

[www.basqueresearch.com/index.asp?hizk=1](http://www.basqueresearch.com/index.asp?hizk=1)

## The other Sichuan disaster

It seems that a huge volcanic eruption in south-west China virtually wiped out all marine life 260 million years ago, according to a study headed by the paleontologist Paul Wignall of Leeds University (UK) and published in the journal *Science*.

Mount Emei, located in present-day Sichuan Province, is believed to have spewed almost half a million cubic metres of lava. The lava flowed down the mountainside and into deep sea waters triggering a massive explosion that emitted vast quantities of sulphur dioxide into the stratosphere, leading to the formation, around the earth, of thick layers of cloud that cooled the atmosphere and culminated in torrential acid rain.

The researchers were able to identify the precise moment of the eruption, as the lava formed a very distinct layer of igneous rock between two layers of sedimentary rock that contain all the marine fossils that can be easily dated. The link between a volcanic eruption and mass extinction is often difficult to establish as it is generally based on the CO<sub>2</sub>