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Pay close attention to what you are about to see. These images will be seen around the world. These rats have been fed with transgenic corn during their entire life. The tumours they suffer from are enormous. The study that revealed the effect of the GMO's on the health of these rats has just been completed. It benefited from exceptional financial and technical means.

GMO's, the moment of truth?

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We were able to witness the study in its entirety. It lasted for 2 years. Following years of doubt and controversies, will we finally know the truth about GMO's? Would we then be faced with a health crisis of global proportions?

CARTONS

ITV SERALINI 10 01 13 11

This is the longest, most thorough study to have been carried out on a GMO and we have also carried out a joint study on the most used pesticide in the world, the Round Up which is a herbicide. It belongs to the principal pesticide category.

ITV SERALINI 10 15 41 17

We spent over a year trying to obtain transgenic corn because no GMO manufacturers were not ready to provide them, because Monsanto makes them sign contracts stipulating that the seeds must not be used for testing, or an arrangement must be made prior to the testing. We wanted the study to be independent.

ITV Spiroux 10 08 48 08

This is the first time that a two year study has been conducted on GMO's and there lies the big difference. Furthermore we tried to evaluate a maximum of biochemical and biological parameters, with repeated blood tests, weighing of the specimens and urine tests.

We study the hepatic and urinary parameters as well as the blood parameters, all the parameters that can be studied. We also study the hormonal parameters which has never been done in previous studies. This experiment is a world premiere.

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Up until now, the corn Nk603, the very one selected for the study, had only been tested over a 3 month period and that in a test environment entirely controlled by Monsanto, its manufacturer. Furthermore, concerning the Round Up, also manufactured by Monsanto and which is used for growing corn, only its active agent, GLYSOPHATE, had been assessed. The entire formula has not been subjected to tests. But one needs to understand that the manufacturers, in order to enable the active agent to penetrate the plant cells successfully, use additives that sometimes can turn out to be more harmful than the actual glysohate.

ITV Seralini 10 09 59 23

We have two clear objectives. Firstly to conduct the studies exactly according to the international requirements, but making sure to be very thorough when it comes to analysing the results. Secondly we want to determine if there are secondary effects. The only way to do this is to carry out test on animals and then to examine all the blood parameters and paying close attention to their organs.

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At this stage it might prove useful to know exactly what use the GMO's have. It is a plant that has been developed either to produce its own insecticide, or to be tolerant to a herbicide thus enabling it to be exposed to massive doses of it without dying. One can understand how GMO's could be interesting for the farmers. For example they would be able to spray their entire field with round up, killing all the weeds in the process and never harming the genetically modified plant. On the other hand it is hard to see the benefits for the consumer who will effectively be ingesting derived from a plant that has absorbed all the pesticides. This is why it is crucial to test not only the GMO, but also the GMO with its residue and the pesticide on its own.

ITV SERALINI 10 31 20 20

This type of testing had never been done before because the corporations doing the tests would do them on GMO's with the Round Up, which meant that we had no idea what between the GMO and the Round Up caused the pathologies, or they did them on GMO's without specifying that this was the case. So what we decided to do was to address the question: are we dealing with the effects of the GMO or of the pesticide? During the last ten years of testing, the national commissions did not envisage a pesticide effect.

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Therefore Europe does not even demand that chronicle toxicity tests be systematically carried out on animals and when they do ask for them to happen, it is the manufacturers who decide of the protocol to be used. For example, the AMFLORA potato was only tested on a group of 30 rats, ten of which were being fed the GMO. The Monsanto corn was tested on 400 rats. 80 of them were fed the transgenic plant, but only 40 of them were then subjected to blood tests. Either way, none of these studies lasted longer than 90 days.

ITV SERALINI 10 23 28 14

What is represented by this figure is that certain groups of rats ingested GMO corn, GMO corn with Round Up residue and Round Up on its own. Every time we go up a level, a rat had died. The limit is 10 due to the number of rats that constitute a group. The dotted line represents the females of the group who die but have a completely normal diet. Only two animals died spontaneously after 550 days. On the other hand every female that has been fed on the GMO, GMO with Round Up or Round Up diet have died more frequently than the other rats.

ITV SERALINI 10 24 17 15

Some will challenge the relevance of such results but what is undeniable is that in the group that has been exposed to the GMO's, there is a 600% increase or 6 times more deaths, compared to the control group. As far as medicine or biology is concerned there is no need for further tests in that department. There is a GMO effect and there is a Round Up effect.

SPIROUX 10 25 15 00

An important fact is that all the studies carried out on the rats are done over a three month period. It so happens that none of the effects are visible until the fourth month. This is fundamental in understanding that studies conducted over a three month period are useless. This conclusion is easily understandable. This is paramount. What it means is that the studies conducted over a three month period are completely useless. It could be said that their only use is to soothe the consciences.

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Every rat out of the 200 hundred that was tested, was dissected by Professor Seralini's team. They did this to know exactly what had affected their organs. The purpose behind this was to identify the way each diet: GMO, GMO and Round Up and Round Up on its own, had acted on the metabolism of each animal, focusing on the development rate of tumours that, and this comes as no surprise, only start to manifest themselves after the initial 3 month period.

SERALINI 10 38 34 10

This figure represents the number of palpable tumours contracted by the animals during the experiment. Here we can see the rats subjected to GMO's compared to those with a regular diet. As you can see very few males have contracted tumours, this is due to them being more resistant during the testing process. What these figures show are the large tumours, each step up represents a large tumour, which can measure 17mm by 17mm. For a rat those measurements are colossal. It would equate to a tumour of this size if seen on a human being.

SERALINI 10 39 17 00

After having studied these tumours, it can be said that 94% of them take effect in the mammary glands which would equate to breast cancer for a woman. We are faced with renal tumours for the males but not only, some males also suffer from mammary tumours. This points towards a hormonal effect that isn't affected by the dosage. 60% of breast cancer cases are caused by hormonal deficiencies.

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Professor Seralini's study holds one last surprise for us and this is a major one. Up until now one could have thought that the main cause of death for the tested rats was coming from the pesticide added to the corn, but what the study highlights-and this for the first time ever-is the fact that the transgenesis itself could have killed the rats. What this means is that just by interfering with the genome of the plant in order to modify it, we are faced with repercussions that no one could have anticipated. This is enough to make us reconsider all the scientific concepts that lead to the creation of GMO's.

SERALINI 10 47 26 10

Round Up had never been tested separately. Whilst conducting cellular studies we saw that the cells of the liver, embryos, kidneys, placenta and of the umbilical cord died much faster. What can be said is that there is an increase in deaths due to GMO's and Round Up.

SERALINI 10 48 11 10

The biggest surprise came when we realised that GMO's, without any Round Up residue, were responsible from an increase in the death rate of females and of some males.

This could be the result of the GMO gene that has been badly assimilated by the plant and that has therefore resulted in a negative effect or due to a secondary metabolical effect.

SPIROUX 10 48 59 20

~~What that means is that we are dealing with a GMO in particular.~~ The modification of a cereal or of GMO corn, with regard to the genes inserted in the corn to make it a GMO corn, can result in different effects. The effects of one GMO do not necessarily mean that they will all have an effect or that a certain type wont have even more effects.

SERALINI 10 49 17 00

What is alarming is that this is the GMO that is being eaten by the Americans, but also the GMO that has been approved for importation and the contamination of the food by the European agencies, including the French ones.

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Nowadays only two types of GMO's are being produced in a few European countries, one is corn and the other a potato. But what about the 27 million tons of transgenic soya that are unloaded each year in European ports? This say is used to feed our cattle but it also makes its way into a number of food stuffs.

ITV SERALINI 10 49 55 00

What we want to achieve with this study is a moratorium, because the situation is serious enough and we are not going to eat everything and anything. The problem is that we have imported without concerning ourselves with what was being imported and that United States has produced crops without knowing what it was producing. There needs to be more studies of this kind and the GMO manufacturers need to conduct this type of study before commercialising their products.

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A moratorium on growing GMO's has been approved by most of the European countries including France. Now that we know the results of the study conducted by Professor Seralini, it could be time to extend this moratorium to all the GMO used in many of our foods?

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To establish an undeniable scientific truth, one needs teams, time and means. Some will say that it takes too much time and that it is too expensive, but had we accepted this cost, could we not have avoided recent sanitary scandals? Will GMO's be responsible yet again for a calamitous scenario? Evidently this is a risk that we can not take, and whilst we are waiting

for scientific certainties, we must be cautious, a principle so often talked about and yet so very seldom carried out.