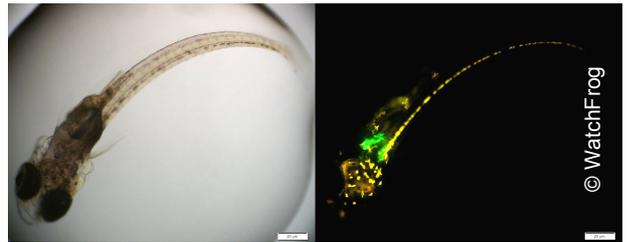


WATCHFROG BRINGS LIGHT TO ENVIRONMENTAL POLLUTANTS AND MALE TRAITS

Évry (France), September 9th, 2014

WatchFrog, a biotech company located on the Genopole campus in Évry, France, and specialized in the diagnosis of endocrine disruptors, recently published results for a new test demonstrating the antiandrogenic effects of pesticides highly present in the environment.

On August 29th, in collaboration with scientific experts from the Okazaki Institute for Integrative Bioscience in Japan, the company WatchFrog published results for a new test that uses Japanese rice fish larvae to measure the endocrinal disruption of antiandrogenic products and pollutants.



Endocrinal disruptors are substances that modify the hormonal systems of animals. They are potentially present in numerous products such as beverages, river water, oceans and industrial waste to name just a few. The presence of environmental estrogenic pollution from the disposal of birth control and its purported role in the feminization of aquatic animals has received much attention lately.

Today however, the WatchFrog researchers are bringing attention to the possible effects of certain antiandrogens, that is, pollutants that act as disruptors of androgens, the hormones that provide male traits. These antiandrogens may cause visible effects on the development of aquatic species, such as fish and amphibians, and potentially reduce their reproductive capacities. A case in point: the three-spined stickleback (*Gasterosteus aculeatus*). In this species, it is the male that builds a nest and protects the eggs laid by the female. This behavior is the result of the action of androgens and thus disturbed by antiandrogens. WatchFrog used this particularity of the three-spined stickleback to develop a fluorescent bio-indicator in the larvae of the model organism *Oryzias latipes*, more commonly called the Japanese rice fish. The *in vitro* test measures the antiandrogenic effect of chemical products: the more the product hampered nest fabrication by stickleback males, the more it “fluoresced” the *O. latipes* larvae. It is conceivable that the substances thus identified, including certain pesticides tested by WatchFrog, may be capable of disturbing the development of the male reproductive system and contributing to a range of pathologies in humans.

Simple, rapid and affordable, this new test is pertinent for not only the surveillance of environmental pollutants but also the screening of chemical substances, agricultural pesticides or everyday products: “*The WatchFrog test could be used to monitor the elimination of these pollutants in water purification plants, but also to select more environmentally-friendly alternatives to pesticides identified as strong endocrine disruptors,*” explains WatchFrog CEO Gregory Lemkine.

Reference: Sébillot *et al.*, Rapid fluorescent detection of (anti)androgens with spiggin-gfp. *Environmental Science & Technology*, 2014 Aug 29.

Genopole press contact: Véronique Le Boulc'h – veronique.leboulch@genopole.fr – +33 (0)1 60 87 44 98

WatchFrog contact: Gregory Lemkine – lemkine@watchfrog.fr – +33 (0)1 69 36 11 18

About WatchFrog. Building upon the research legacy of the National Museum of Natural History, WatchFrog develops innovative solutions for pollutant analyses. The company has unique expertise in:

- the measurement of the environmental effects of pollutants,
- the identification of products or compounds capable of disturbing hormonal balance,
- the detection of the toxic effects of a large panel of therapeutic or chemical substances.

WatchFrog is financed by CapDecisif Management.
www.watchfrog.fr - info@watchfrog.fr

About Genopole. Genopole is the leading French biopark dedicated to research in genetics and biotechnologies for healthcare and the environment. Genopole unites 19 research laboratories, 80 biotech companies and 21 technical platforms as well as university training programs (Évry-Val-d'Essonne University). Its objectives are to favor the development of research in genomics, post-genomics and other related fields, assure the transfer of resulting technology to the industrial sector, establish academic-level training programs for these fields, and finally to create and support biotech companies. Genopole is funded mainly by the Ile-de-France Regional Council (30%), the Essonne Department Council (26.5%) and the French State (15.7%).
www.genopole.fr