



Aurélie Floch
R&D officer



ANTI OXIDANT POWER

By I Feel Good event

Aurélie, tell us about yourself and your journey?

I have been a researcher at AOP since 2021. Specialist in cell biology, I am mainly involved in the development of new tests to expand our offer and meet market needs.

Tell us about AOP?

AOP is a service company created in 2017 and specialised in cellular efficiency tests. We are located in Toulouse in the southwest of France. We offer our customers an innovative approach for evaluating the in vitro effectiveness, on living cells, of the antioxidant activity of natural extracts, ingredients or finished products. Our patented technologies, available on numerous cellular models, provide quantitative and reproducible measurements. AOP is finally a team of scientists on a human scale, capable of adapting and best supporting our clients' projects.

What are AOP's missions?

AOP's mission is to provide market players with simple, standardized and high-throughput technologies ensuring the demonstration of antioxidant effects on all types of living cell models. AOP's mission is to help its clients explore and best exploit the potential of their assets or finished products.

What are your different sectors of expertise?

Our expertise is focused on the issue of oxidative stress and antioxidants, which leads us to intervene mainly in the field of nutrition and cosmetics for which this issue is central during the development of new active ingredients or new formulas. We work with all types of companies, from young groups to major market players, based in France but also abroad.

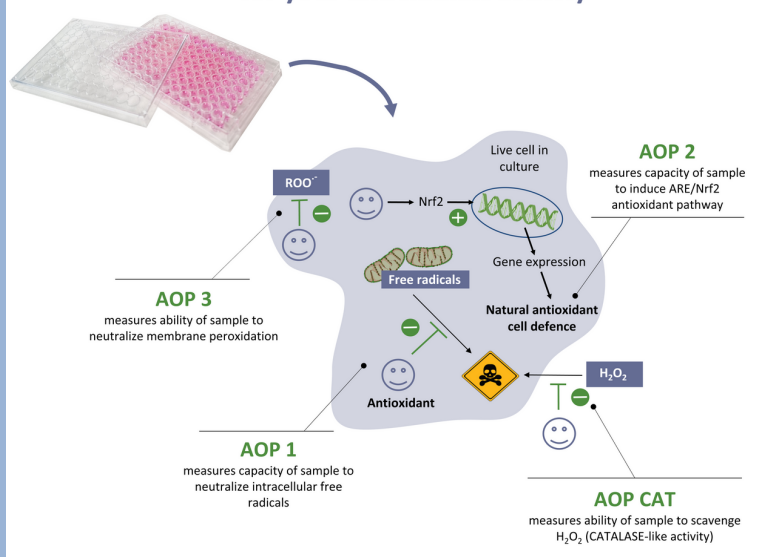


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Tell us about the different services offered?

AOP develops and markets a wide range of innovative cellular tests linked to the cellular response to oxidative stress for the cosmetic and nutraceutical field: direct cellular protection against oxidative stress, catalase effect, activation of the ARE-Nrf2 pathway (cellular defense against oxidative stress), anti-pollution and photoprotection effect (UV and blue light).

AOP : A complete set of intracellular efficacy assays for your antioxidant activity



We also carry out tests to measure anti-inflammatory effects and intestinal absorption tests. Our test catalog is largely available on a wide range of cellular models: immortalized or primary cells, 2D or 3D models, commercial or more specific models. We provide low, medium or high flow services. Finally, we also offer support to our clients in the writing of scientific articles, or other communication media, using the results obtained.

You offer a service activity, are your technologies transferable to the customer?

Absolutely, since this year two of our technologies have been available in the form of kits. First of all, this is the “AOP1” test which makes it possible to measure the antioxidant activity of active ingredients directly inside living cells.

In this test, reactive oxygen species (ROS) are generated in controlled quantities inside the cell and the ability of the product tested to trap these ROS is directly measured. Then there is the “LUCS” test which allows the assessment of toxicity on living cells. These two tests are very simple to implement and work on the majority of cellular models. They are carried out on cells in culture and are therefore multiplexable with other cell markings or tests.



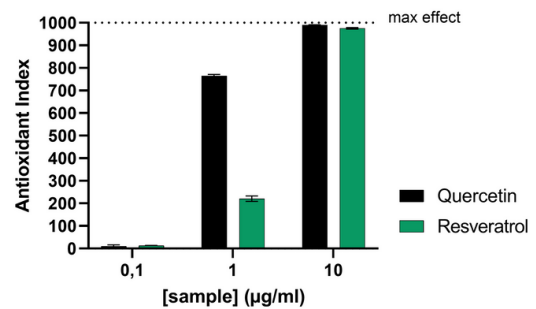
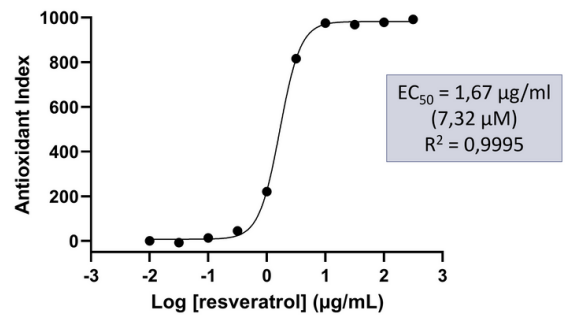
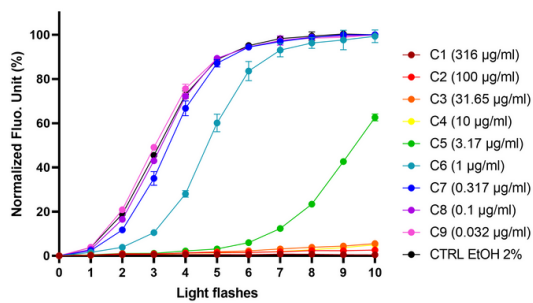
Can you tell us more about the tailor-made solutions, which are also offered by your company?

At AOP we are accustomed and able to provide our clients with custom solutions, best suited to their project. Depending on the type of questions asked, we are able to provide specific solutions that can be achieved internally or by calling on our network of partners, such as the company DIVA for example.

Tell us more about your scientific approach?

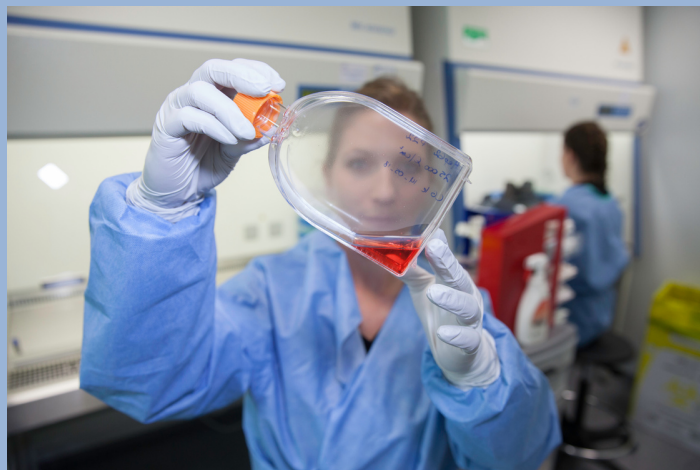
We carry out our antioxidant effect tests directly inside human cells in culture. Thus, unlike tests such as ORAC, DPPH, etc., we obtain results that are closest to physiology and reflect the bioavailability of active ingredients. We carry out our dose-response tests in order to obtain quantitative data (effective concentrations: EC50, EC10, EC90) that can be used by our customers to make the best choice of active ingredient or formulation but also to support their claims or communications to the using scientifically established numerical data.

Example of AOP1 results HaCat keratinocytes treated with increasing doses of resveratrol



What makes AOP strong?

At AOP we have the experience and the ability to provide our customers with tailor-made, adapted solutions. The AOP team has solid expertise in the field of antioxidants and cell culture. By combining several complementary tests focused on the effect at the level of the living cell, AOP offers you the ability to establish a complete profile of the antioxidant activity of your products, extracts or active ingredients. Beyond carrying out our tests, our team is able to support you throughout your project: from the choice of tests and experimental conditions to implement to the use of the results obtained in your claims or publications. s best for their project. Depending on the type of questions asked, we are able to provide specific solutions that can be achieved internally or by calling on our network of partners, such as the company DIVA for example.



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What did you present to I FEEL GOOD visitors during this new edition?

It was AOP's first participation in the I FEEL GOOD event, I had the chance to meet our current and future partners there! I presented them with our new catalog which has expanded this year with the appearance of new cellular tests and models. In particular, we have developed new solutions to respond to the current trend of skinification in hair care, but also tests relating to the exposure of the skin to external stress (pollution, blue light, UV). To talk about these new tests, I had the pleasure of sharing a stand with our partner DIVA expertise and we were able to present the fruit of our latest research: the adaptation of our AOP1 antioxidant effect test on a pre- adipocytes.



afloch@laas.fr