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**S.S.D: AGR/11**

**Utilizzi innovativi di molecole naturali o di sintesi  
per la lotta agli insetti infestanti**

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## *Abstract*

Gli insetti possono generare problematiche in ambito urbano, merceologico e agronomico. La presente tesi raccoglie i risultati preliminari di tre progetti di ricerca, ognuno riguardante uno dei sopracitati aspetti. Ognuno dei progetti è vincolato da accordi di segretezza in virtù delle potenzialità brevettuali dei risultati ottenuti.

Per l'ambito urbano, la ricerca è stata condotta all'interno di un progetto nazionale del Ministero dell'Industria che prevedeva lo sviluppo di prodotti tessili ingegnerizzati per conferire protezione contro gli insetti e in particolare contro *Aedes albopictus*.

Per l'ambito merceologico, la ricerca è stata sviluppata in collaborazione con una importante azienda alimentare italiana per contrastare le infestazioni di *Plodia interpunctella* in confezioni di praline a base di cioccolato.

Per l'ambito agronomico, la ricerca ha visto la collaborazione in una impresa britannica orientata a produrre prodotti insetticidi di origine naturale. Il progetto di ricerca si è focalizzato nei confronti di *Myzus persicae* al fine di individuare nuove molecole a minor impatto ambientale che possano essere utilizzate con successo contro specie che molto spesso risultano di difficile controllo a causa dei fenomeni di resistenza agli insetticidi che si sono selezionati nel tempo.

L'esigenza, trasversale a tutti i progetti, è quella di selezionare molecole a minor impatto ambientale rispetto a quelle tradizionali ma con proprietà insetticida e/o repellente paragonabili o superiori a quelle utilizzate ad oggi contro gli insetti oggetto dello studio.

## ***Abstract***

Insects can generate problems in urban, storage and agronomic fields. This work collects the preliminary results of three research projects, each one regarding the above-mentioned arguments. Each projects is protected by secret agreement for the potential creation of patents related to the obtained results.

For urban field, the research was carried out in the framework a national project funded by the Italian Ministry of Industry. The project involved the development of textile products engineered to confer protection against insects and in particular against *Aedes albopictus*.

For store product field, the research was carried out in collaboration with an important Italian food company to counter the infestations of *Plodia interpunctella* using repellent molecules.

For agronomic field, the research was developed in collaboration with a British company oriented to produce insecticides of natural origin. The project was focused on *Myzus persicae*, in order to identify new molecules with a lower environmental impact that could be successfully employed against species which are difficult to control due to resistance phenomena.

The aim, transversal to all projects, is to select molecules with a lower environmental impact than traditional ones but with insecticidal and/or repellent properties comparable (or superior) to those used currently against the insects object of the study.

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