

RECOMMENDATIONS

- Care must be taken while dealing with pesticides.
- Personal protective equipments should be used.
- Reduce the amount of pesticides you consume by washing and scrubbing all fresh fruits and vegetables thoroughly under running water.
- Avoid prolonged contact with pesticides in closed or poorly ventilated spaces and breathing vapors from pesticides while handling pesticides without appropriate protective equipment.
- Washing hands after handling pesticides or their containers, splashing or spraying pesticides and avoid touching pesticide-treated surfaces.

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المخلص العربي

أجريت هذه الدراسة في مختبر علم السموم البيئية "قسم الدراسات البيئية، معهد الدراسات العليا والبحوث - جامعة الاسكندرية. وكان الهدف من هذه الدراسة هو التحقق في قدرة الميثوميل للحث على الإجهاد التأكسدي، الاضطرابات البيوكيميائية والتغيرات النسيجية مقارنة مع استخدام المبيد الحيوي باسيلس ثورينجيسيس إلى جانب استخدام خليط منهما في بلازما و كبد وكلى الجرذان. تم تحديد مستويات الجذور الحرة (TBARS) و مضادات الأكسدة الأنزيمية وغير الأنزيمية في الجرذان. وبالإضافة إلى ذلك تم تقييم المؤشرات الحيوية لوظائف الكبد والكلية أيضا تم تقسيم الجرذان إلى أربع مجموعات : الأولى لم يتم معاملتها بأى مبيد (المجموعة الضابطة)، الثانية تم معاملتها بمبيد الميثوميل، الثالثة تم معاملتها بالمبيد الحيوي باسيلس ثورينجيسيس ، الرابعة تم معاملتها بخليط من الميثوميل و الباسيلس ثورينجيسيس. تم اعطاء الجرعات المحددة عن طريق الفم.

يمكن تلخيص النتائج المتحصل عليها علي النحو التالي :

- 1- حدث زيادة معنوية في مستوى الجذور الحرة (TBARS) في البلازما و الأنسجة (الكبد والكلية) في الجرذان في كل من المجموعات التي تم معاملتها بالميثوميل و الباسيلس ثورينجيسيس كل على حده و في حالة خليط منهما بالمقارنة مع المجموعة الضابطة.
- 2- حدث انخفاض معنوي في تركيز نشاط الجلوتاثيون اس- ترانسفيراز (GST) ، الكاتاليز (CAT) ، السوبر اوكسيد ديسموتير (SOD) و محتوى الجلوتاثيون المختزل (GSH) في البلازما و الأنسجة (الكبد والكلية) في الجرذان في كل من الثلاثة مجموعات التي تم معاملتها بالمقارنة بالمجموعة الضابطة.
- 3- لوحظ ايضا حدوث انخفاض معنوي في أنزيمات الاسبريت امينوترانسفيريز (AST) و الألانين امينوترانسفيريز (ALT) و الفوسفاتير القاعدى (ALP) في الأنسجة (الكبد و الكلية) بينما لوحظ زيادة معنوية في نشاط انزيم الاكتات ديهيدروجينيز (LDH) في الكبد في كل المجموعات التي تم معاملتها بالمقارنة بالمجموعة الضابطة.
- 4- قد حدث ارتفاع معنوي في نشاط انزيمات الاسبريت امينوترانسفيريز (AST) و الألانين امينوترانسفيريز (ALT) و الفوسفاتير القاعدى (ALP) في البلازما في كل المجموعات التي تم معاملتها بالمقارنة بالمجموعة الضابطة.
- 5- قد انخفض محتوى البروتين في في البلازما و الأنسجة (الكبد والكلية) في الجرذان في كل من المجموعات بالمقارنة بالمجموعة الضابطة.
- 6- قد لوحظ انخفاض نشاط انزيم أستيل كولين استيراز (AChE) بشكل ملحوظ في البلازما في كل المجموعات التي تم معاملتها مقارنة بالمجموعة الضابطة.
- 7- كما لوحظ ارتفاع ملحوظ في محتوى اليوريا و الكرياتينين و الكوليستيرول الكلى والدهون ثلاثية الجليسريدات والليوبرو تينات منخفضة الكثافة كما انخفضت الليوبرو تينات مرتفعة الكثافة في كل المجموعات التي تم معاملتها بالمقارنة بالمجموعة الضابطة.
- 8- بالنسبة لتحليل عينات انسجة الكبد في المجموعة المعاملة بالميثوميل أظهرت وجود تغيير مائي في خلايا الكبد، والتليف والالتهاب كبدى. اما بالنسبة المجموعة المعاملة بالباسيلس ثورينجيسيس قد لوحظ وجود نخر تدريجي، والتليف والالتهاب كبدى و ايضا المجموعة المعاملة بالميثوميل وباسيلس ثورينجيسيس معا اظهرت وجود تغيير مائي، والتليف والالتهاب كبدى.
- 9- اما بالنسبة لعينات انسجة الكلية المعاملة بالميثوميل أظهرت وجود الاختناقات مع ورم الخلايا البطانية ورمور الخلايا الطلانية المبطنة للانابيب الكلوية و بالنسبة المجموعة المعاملة بالباسيلس ثورينجيسيس قد لوحظ وجود تغيير مائي في الأنابيب الكلوية، سماكة في الغشاء القاعدي الكبيبي مع ورم في الخلايا الظهارية و البطانية و ايضا المجموعة المعاملة بالميثوميل وباسيلس ثورينجيسيس معا اظهرت وجود تغيير مائي في الأنابيب الكلوية

وسماكة في الغشاء القاعدي الكببي مع ورم في الخلايا الظهارية و البطانية وفي الأوعية الدموية وذلك بالمقارنة بالمجموعة الضابطة.

وفي الختام فمن الواضح أن كل من المبيد الحشري(الميثوميل) والمبيد الحيوى (باسيلس ثورينجينيسيس) كل علي حده له تأثيره السام الملحوظ على الجزدان من خلال قياس بعض المؤشرات الحيوية و التغيرات النسيجية.

كما استنتج من هذه الدراسة ان باسيلس ثورينجينيسيس له تأثير تحفزي واضح على الميثوميل عند عمل خليط منهما على المؤشرات الحيوية والنسيجية.



جامعة الإسكندرية
معهد الدراسات العليا والبحوث
قسم الدراسات البيئية



تأثيرات بكتيريا باسيلس ثورينجينسيس السامة ومبيد الميثوميل على أكسدة الدهون ونظام الدفاع المضاد للأكسدة في الجرذان

رسالة مقدمة إلى

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ضمن متطلبات درجة الماجستير

في

الدراسات البيئية (شعبة العلوم البيولوجية)

مقدمة من الطالبة

رضوى صلاح عبد العاطى محمود عيسى

بكالوريوس العلوم – كيمياء/علوم البيئة- جامعة الإسكندرية ٢٠١١

قسم الدراسات البيئية
معهد الدراسات العليا والبحوث
جامعة الإسكندرية

٢٠١٥

تأثيرات بكتيريا باسيلس ثورينجينسيس السامة ومبيد الميثوميل على
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مقدمة من الطالبة

رضوى صلاح عبد العاطى محمود عيسى

للحصول على درجة

الماجستير فى الدراسات البيئية (شعبة العلوم البيولوجية)

التوقيع

لجنة المناقشة والحكم على الرسالة

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