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**PRELIMINARY STUDY ON THE PRODUCTION
OF NITRIC OXIDE AND EXPRESSION OF
NITRIC OXIDE SYNTHASE BY CAMEL
MACROPHAGES**

(With One Table and One Figure)

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دراسة مبدئية لإنتاج أكسيد النيتريك والتعبير الجيني عن انزيم تمثيل أكسيد
النيتريك لماكروفاج الجمال

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من المعروف أن أكسيد النيتريك ينتج بواسطة الماكروفاج المحفزة بواسطة بعض الانتيجينات أو الميكروبات. فى هذه الدراسة تم فصل كرات الدم البيضاء من دم الجمال بواسطة الفيكول وبعد ذلك تم فصل الخلايا وحيدة النواة وهذه الخلايا تم إنمائها إلى الماكروفاج. تم تعريض خلايا الماكروفاج البالغة على متعدد السكريات الدهنية المشتقة من الإشيرشيا كولاي وكذا أنتيجين جدري الأغنام وتم قياس كل من أكسيد النيتريك والحمض النووى المرسل الخاص بانزيم تمثيل أكسيد النيتريك وقد استطاع كلا الانتيجينين تحفيز إنتاج أكسيد النيتريك مع كون أنتيجين جدري الأغنام الأقل تحفيزاً. وعند إجراء اختبار تفاعل البوليميريز المتسلسل باستخدام بوائى خاصة بالحمض النووى المرسل الخاص بإنتاج أكسيد النيتريك المنتج من ماكروفاج الجمال أسفرت الدراسة عن منتج بنفس حجم المقابل له فى الفئران مما يدل على ثبات فى العامل الوراثى الخاص بذلك.

SUMMARY

Nitric Oxide is produced by macrophage when activated or invaded by certain antigens or microbes. In the present study, camel peripheral blood leukocytes were obtained by ficoll cushion. Monocytes were separated and grown to macrophages. The mature macrophages were exposed to E. coli LPS as well as sheep pox virus antigen. Nitric oxide

Conclusively, results obtained in this study indicate that nitric oxide and nitrogenous compound intermediates are produced by activated camel macrophages like macrophages of other animal species. This supports, to a considerable limit, the stability of the microbicidal armatures in different animal species. However, further studies are required to detect production of other armatures such as the active oxygen radicals by camel macrophages. Moreover, the iNOS mRNA was found to be conserved among the species studied so far including camel.

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