

# بسم الله الرحمن الرحيم



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شبكة المعلومات الجامعية التوثيق الالكتروني والميكرونيلم





# جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

## قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات



يجب أن

تحفظ هذه الأقراص المدمجة يعيدا عن الغيار







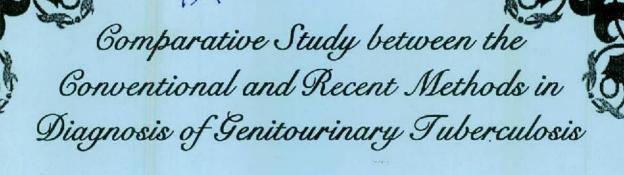






بالرسالة صفحات لم ترد بالأصل





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For

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بسم الله الرحمي الرحيم

يرفع الله الزين آمنوا مناهم والنزين أوتوا العلم ورجات والنزين أوتوا العلم ورجات والاث بما تعملون خبير

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# Introduction And Aim of the work



# Introduction and aim of the work

Mycobacteria are responsible for considerable human morbidity and mortality worldwide. *Mycobacterium tuberculosis* (MTB) infects 1.7 billion people worldwide and causes 3 million deaths each year, the highest mortality rate caused by any single infectious organism (*Griethuysen et al, 1996*).

The global incidence of tuberculosis (TB) was predicted to increase by 36% between 1990 and 2000. Notification rates of TB in some Western European and other industrialized countries have increased (Raviglione, 1995). These rates may again increase in the near future because of the population growth, migration of people from regions of the world with higher incidence of TB, and the human immunodeficiency virus (HIV) epidemic (Torrea et al, 1996).

The prevalence of TB increased also among other high - risk populations like chronic alcoholics, homeless people and drug abusers (Magdalena et al, 1998). In addition, the advancing age of population and the general neglect of TB c ontrol p rograms in m any countries have a lso c ontributed to the increased incidence of TB (Brudney and Dopkin, 1991). Also, drug resistant MTB strains have

emerged, which further complicates its control programs (Bloch et al, 1994).

According to World Health Organization (WHO), one third of the population is infected with TB and there are 8 to 10 million new TB cases every year (Gerdes et al, 1999).

Because of the increased incidence of TB in many parts of the world, the need for rapid diagnosis has become paramount. An essential element in the control of TB is the rapid, sensitive and specific identification of the causative agent. Until now, diagnosis is largely based on clinical signs, radiological findings, tuberculin tests, microscopic examination and culture of samples for MTB. However, these methods have many disadvantages, tuberculin tests lack specificity and only give an indication of previous exposure to TB. Direct microscopic examination does not have enough specificity or sensitivity, while mycobacterial isolation is time consuming (Bergman and Woods, 1996).

An alternative to these classical methods, new nucleic acid-based technologies may be more promising because it may be more rapid, sensitive and specific means of identification of mycobacteria. Two commercial standardized nucleic acid - based amplification techniques have been reported to yield reliable results within 5 to 7 hours of sample processing: Roche Amplicor MTB and Gen - probe AMTB. The