



شبكة المعلومات الجامعية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ





شبكة المعلومات الجامعية



# شبكة المعلومات الجامعية

## التوثيق الالكتروني والميكرو فيلم

# جامعة عين شمس

التوثيق الالكتروني والميكرو فيلم

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شبكة المعلومات الجامعية



بالرسالة صفحات  
لم ترد بالأصل

# **Molecular Genetics Studies of Some Developmental Abnormalities in Wild Mice**

**Thesis presented**

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## قرار لجنة الحكم والمناقشة

قامت لجنة الحكم والمناقشة بفحص الرسالة وترى انها اشتملت على بحثا هادفا وموضوعات لها اهميتها فى مجال الوراثة. كما قامت اللجنة بمناقشة المتقدمه مناقشه مستفيضه ووجدت ان الطالبه تلم الماما كاملا بكل ما جاء بها.

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# Introduction

## Introduction

Many years ago, alert observers noticed among thousands of laboratory mice a few individuals that, unlike their littermates, exhibited areas of white spotting on their fur. No one could predict that these abnormalities would ultimately contribute to the characterization of a receptor (*c-Kit*) and a corresponding ligend (stem cell factor, SCF). *c-Kit* receptor and its ligand are critical not only to the migration and development of melanocytes, but also to hematopoiesis, gametogenesis, mast cell development and, perhaps, development of the nervous system. Also, no one could predict that this receptor and ligend would be shown to regulate the development of multiple distinct cellular lineages not only in the mice, but also in human and other primates, or that *c-Kit* and its ligend would be found to influence the secretory function of cells bearing this receptor, as well as their development.

*c-Kit* is a proto-oncogene encoding a transmembrane tyrosine protein kinase receptor (**Besmer et al. 1986**) and is located on mouse Chromosome 5 and human chromosome 4. The ligend for *c-Kit* has been named stem cell factor encoded at Steel (*Sl*) locus on chromosome 10 (**Copeland et al. 1990**). This receptor and its ligend are integral parts of the mechanisms by which cells receive and transmit signals to ensure orderly patterning and tissue formation during embryogenesis. A double