

UNIVERSITETET I OSLO

Det matematisk-naturvitenskapelige fakultet

Exam in: **MBV2010 Molecular Biology**

Day of exam: **August 12, 2004**

Exam hours: **(3 hours)**

This examination paper consists of **1** page.

Appendices: **None**

Permitted materials: **None**

Make sure that your copy of this examination paper is complete before answering.

1. In which molecular processes are the following proteins involved

DNA ligase
Histone acetylase
Tryptophan repressor
GroEL
DNA polymerase I
Guanylyl transferase
Elongation factor Tu (EF-Tu)
DnaA
Janus kinase (JAK)
DNA glycosylase

2.
 - a) Describe initiation of translation in prokaryotes.
 - b) Name and explain different ways in which polypeptides can be modified after translation.

3.
 - a) What are GU-AG introns and where do they occur?
 - b) Explain splicing of GU-AG introns.
 - c) How does splicing of self-splicing Group I introns differ from splicing of GU-AG introns?

4.
 - a) What is the role of sigma subunits in initiation of transcription in bacteria?
 - b) Explain how initiation of transcription in the nucleus of eukaryotes differs from initiation of transcription in prokaryotes?

