



دانشگاه علوم پزشکی کرمان



Title of Article

MYC as a target for cancer treatment

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Content

1) Introduction

2) Structure of MYC

3) Mode of action

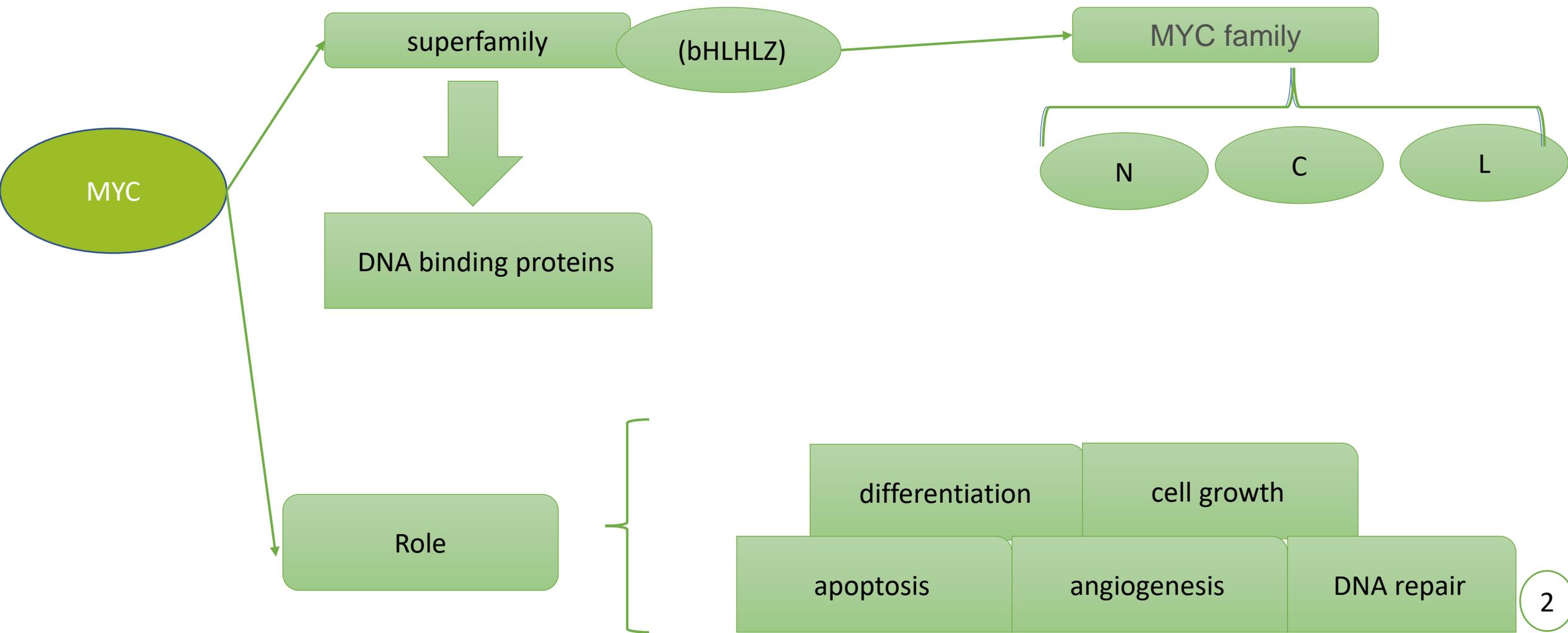
4) Mechanisms activating in cancer

5) Role of MYC in tumorigenesis

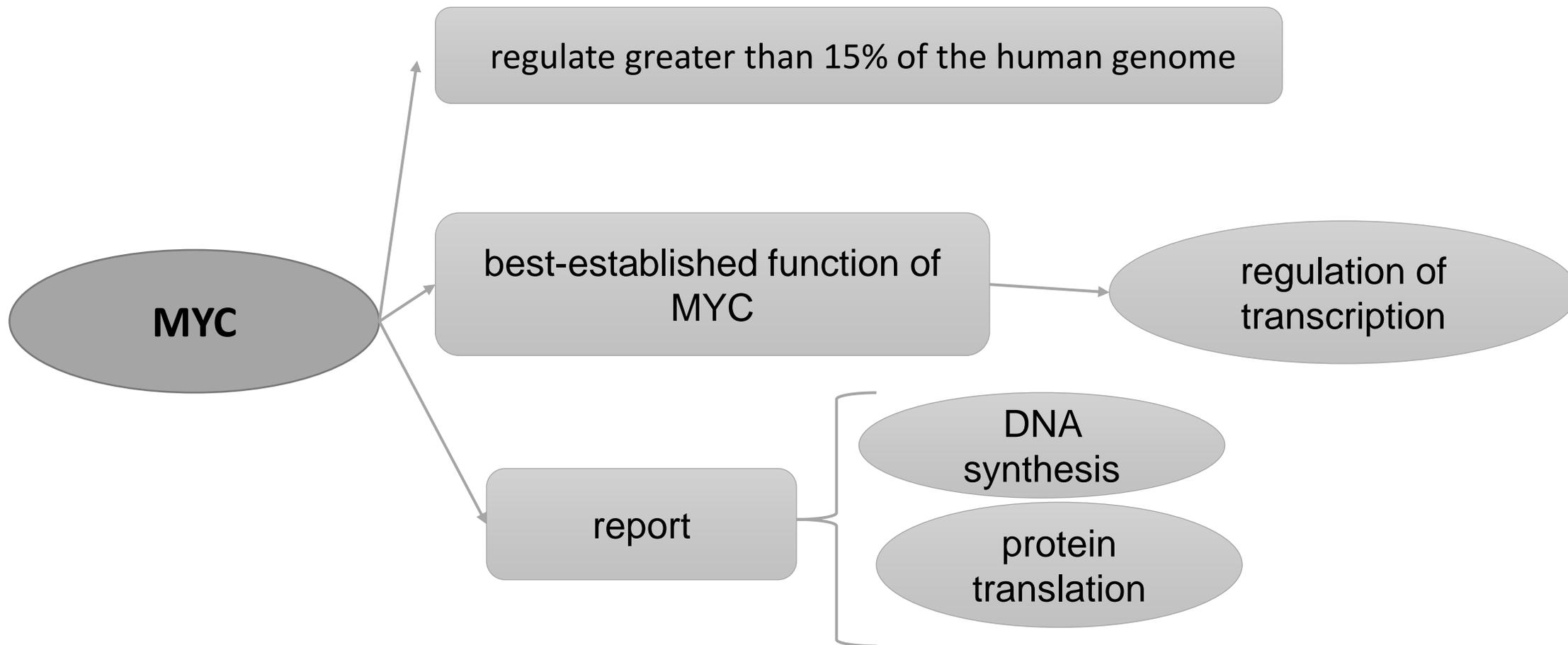
6) therapeutic target for cancer

7) conclusion

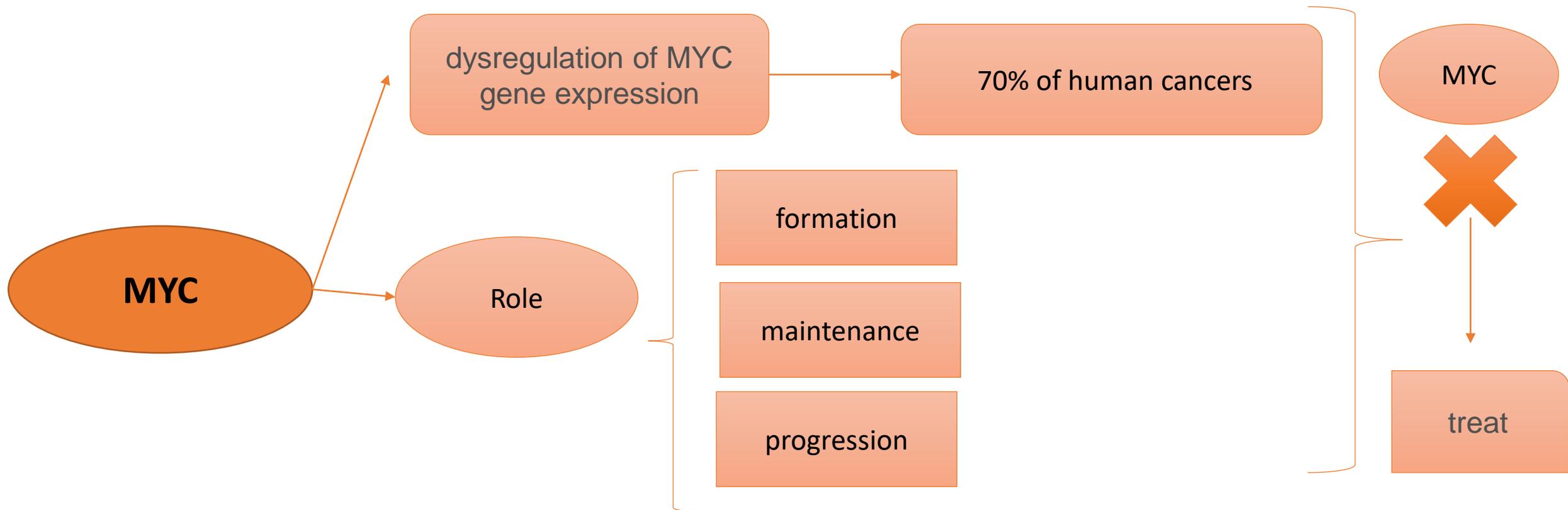
Introduction



Introduction



Introduction



Structure of MYC

MYC

3 main domains

N-terminal

activation domain

central region

nuclear localization

stability control

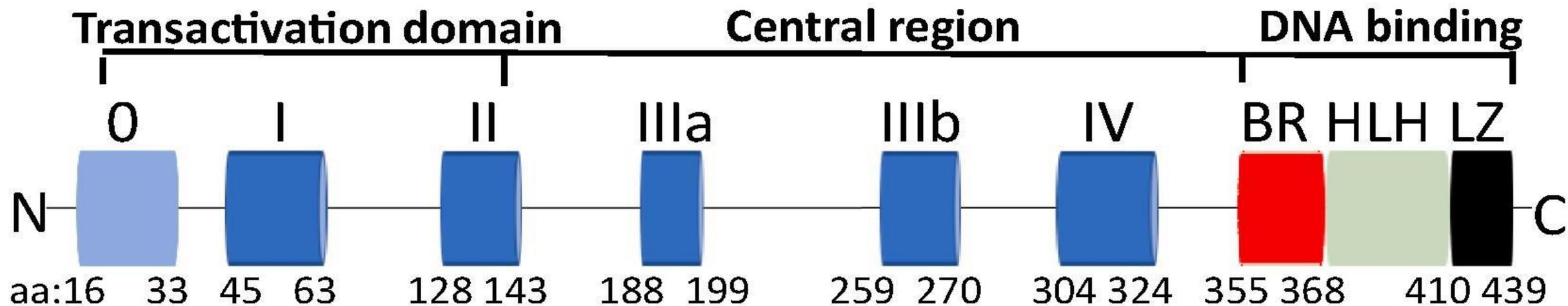
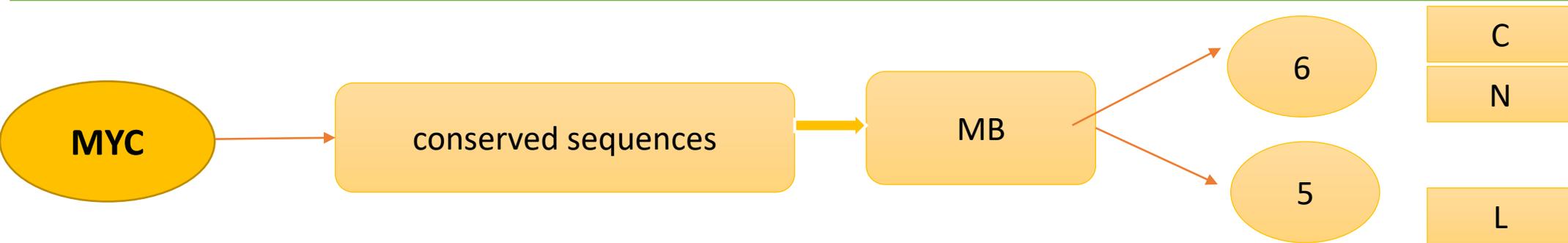
C-terminal

binding to DNA

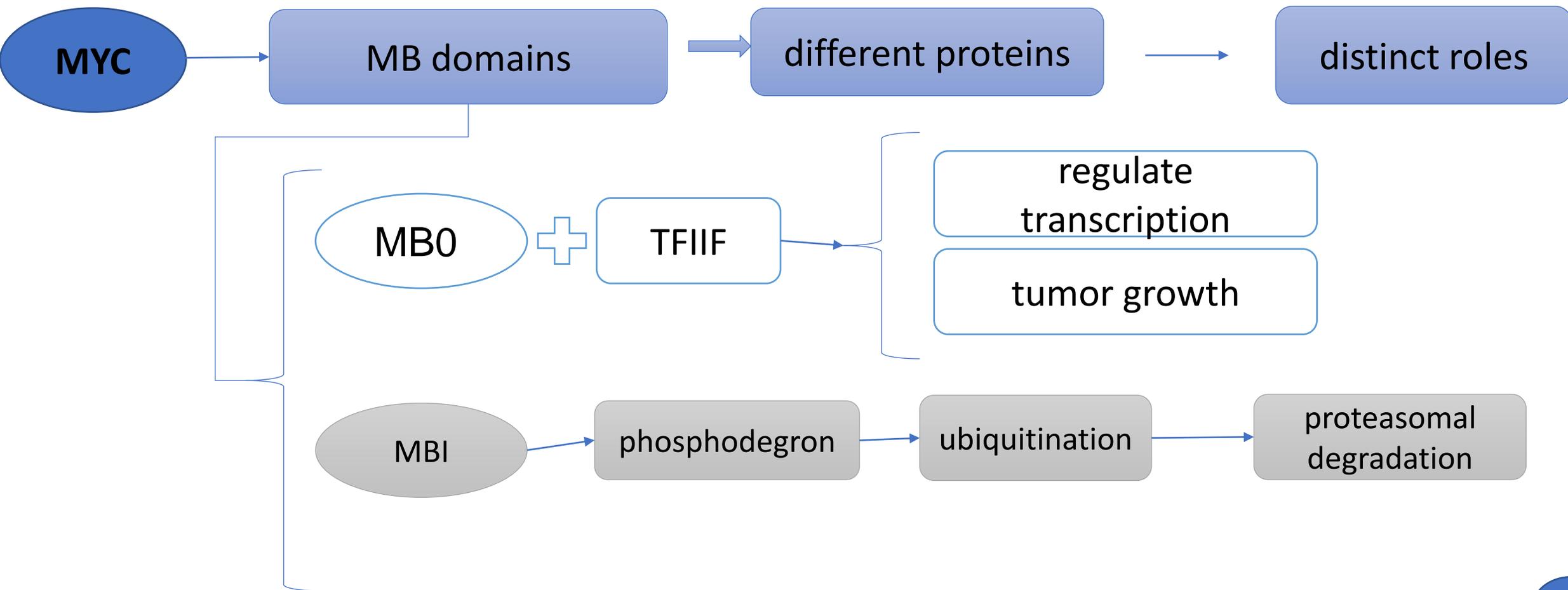
interaction with
MAX

essential
for MYC
function

Structure of MYC



Structure of MYC



Structure of MYC

MYC

MB domains

MBII

gene transcription

Activation

Repression

MB0

necessary

cancer-inducing effects

MBIIIa

gene repression

regulation of apoptosis

Structure of MYC

MYC

MB domains

MBIIIb

protein WDR5

attach to chromatin

MBIV

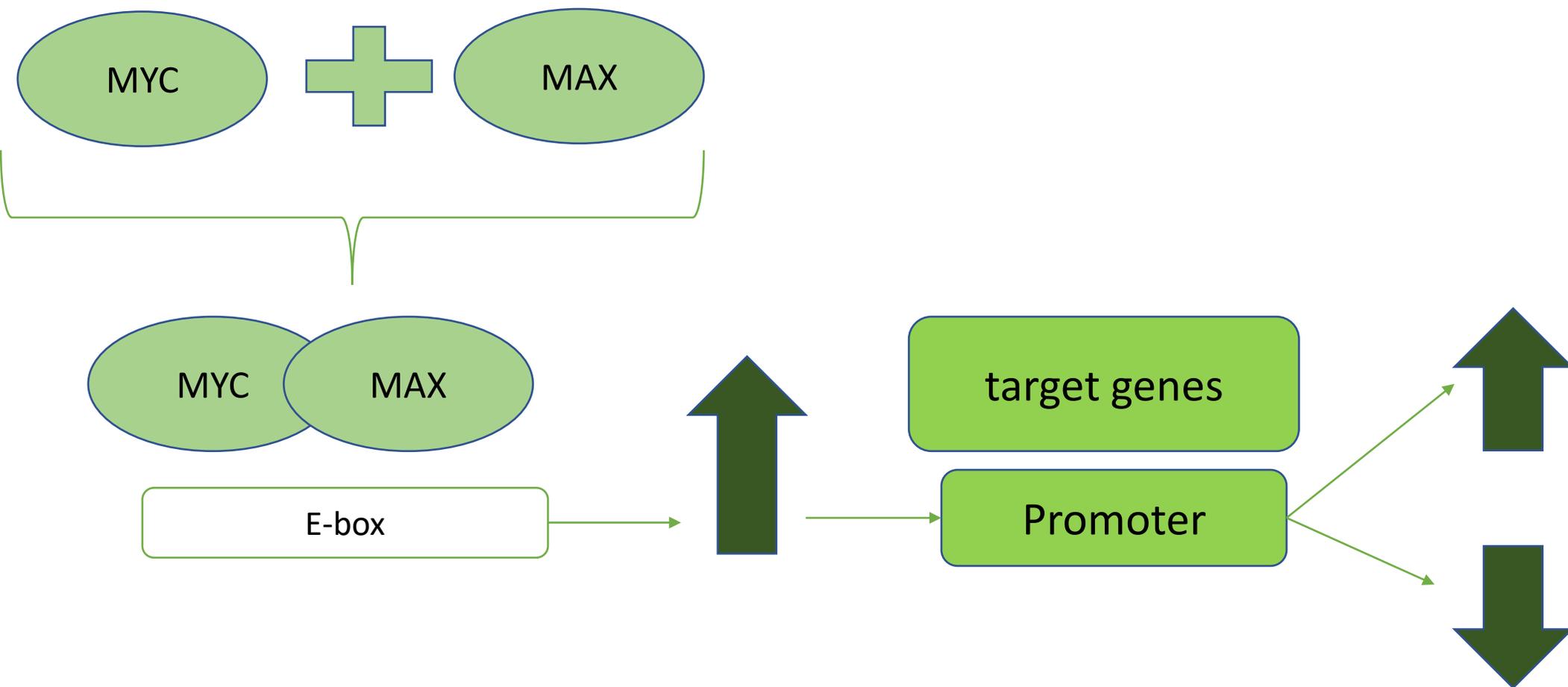
induction of apoptosis

chromatin binding

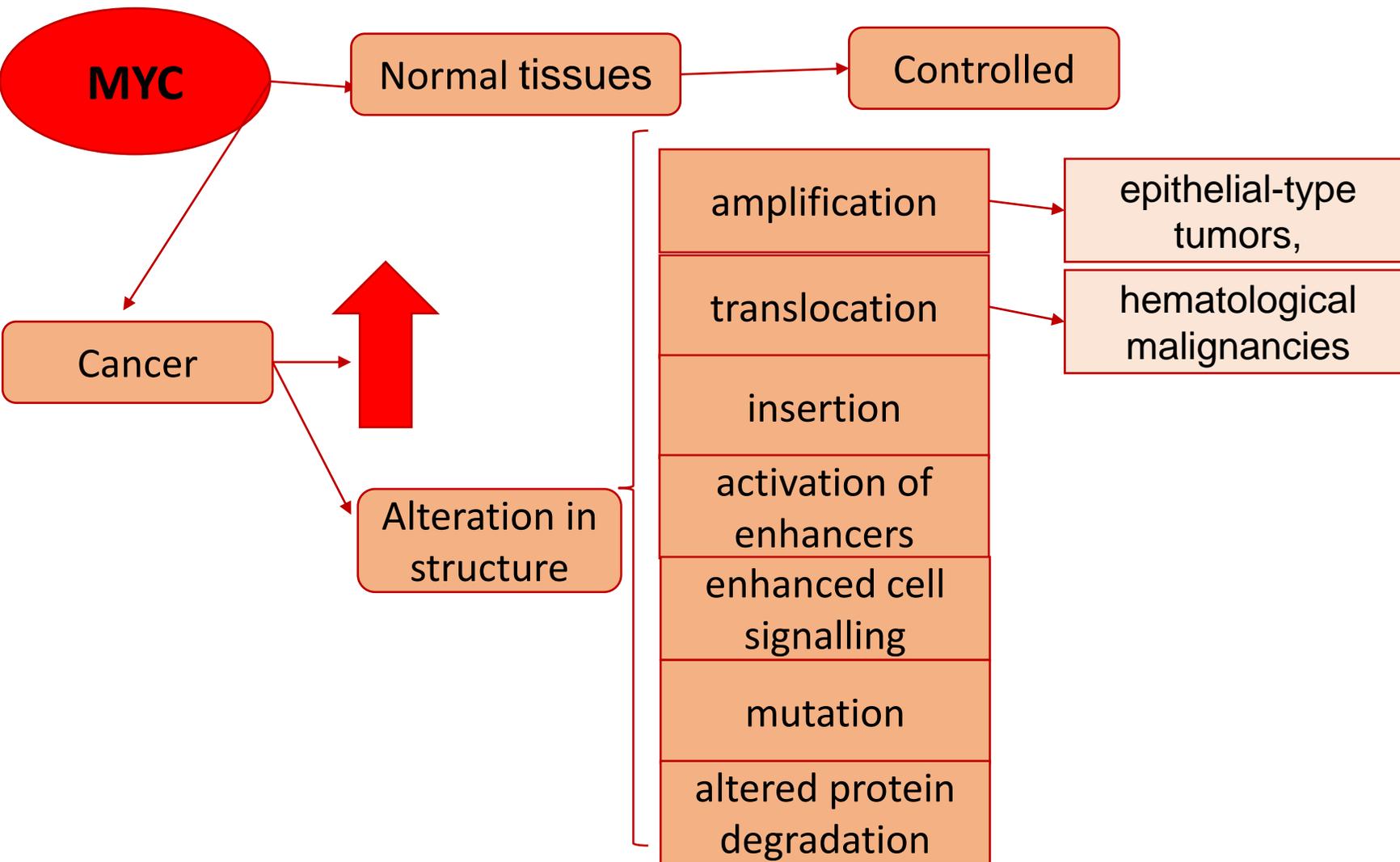
G2 cell arrest

interaction with (HCF-1)

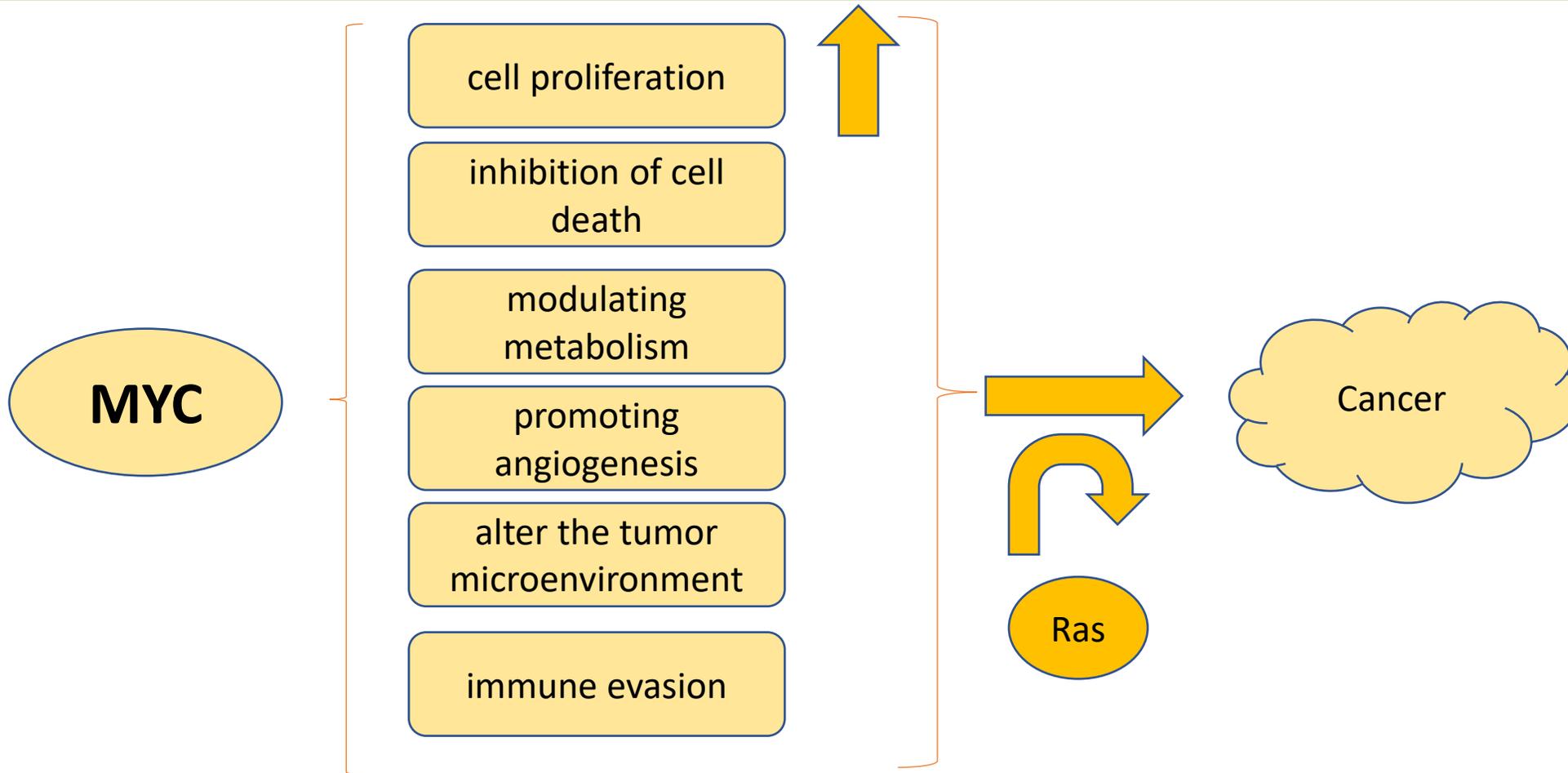
Mode of action



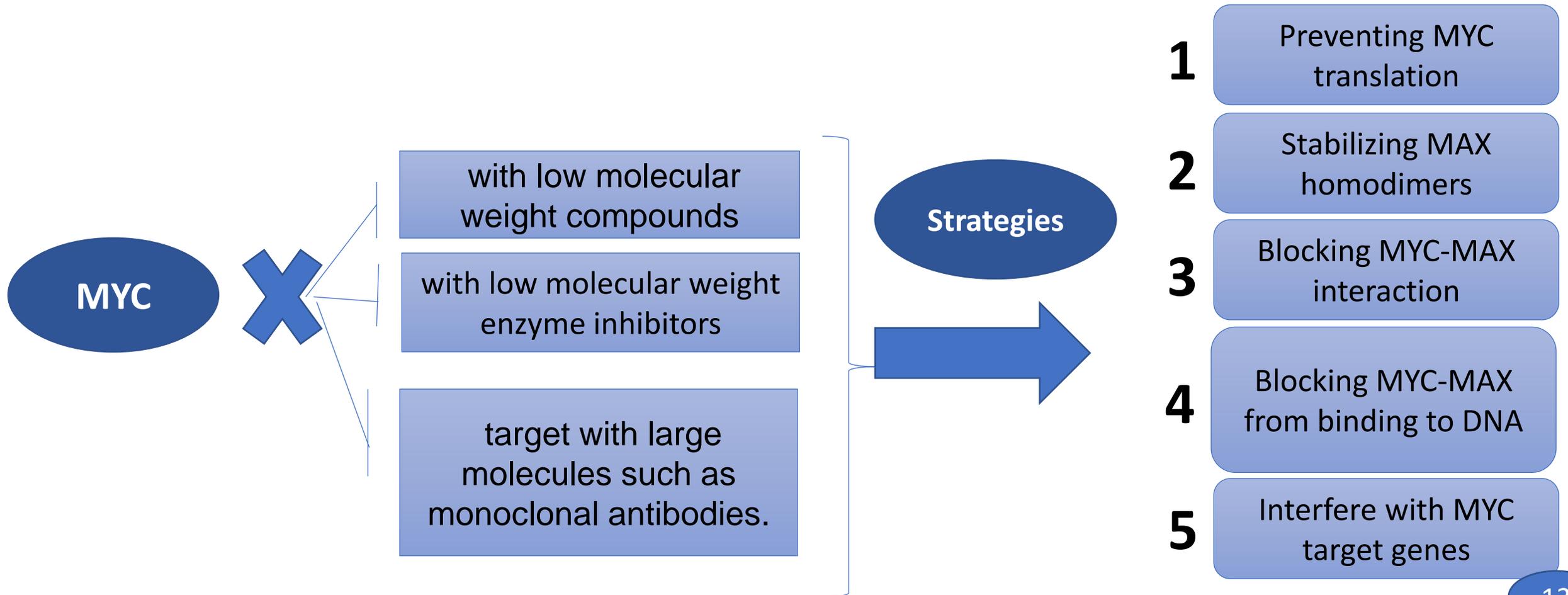
Mechanisms activating MYC in cancer



Role of MYC in tumorigenesis



therapeutic target for cancer

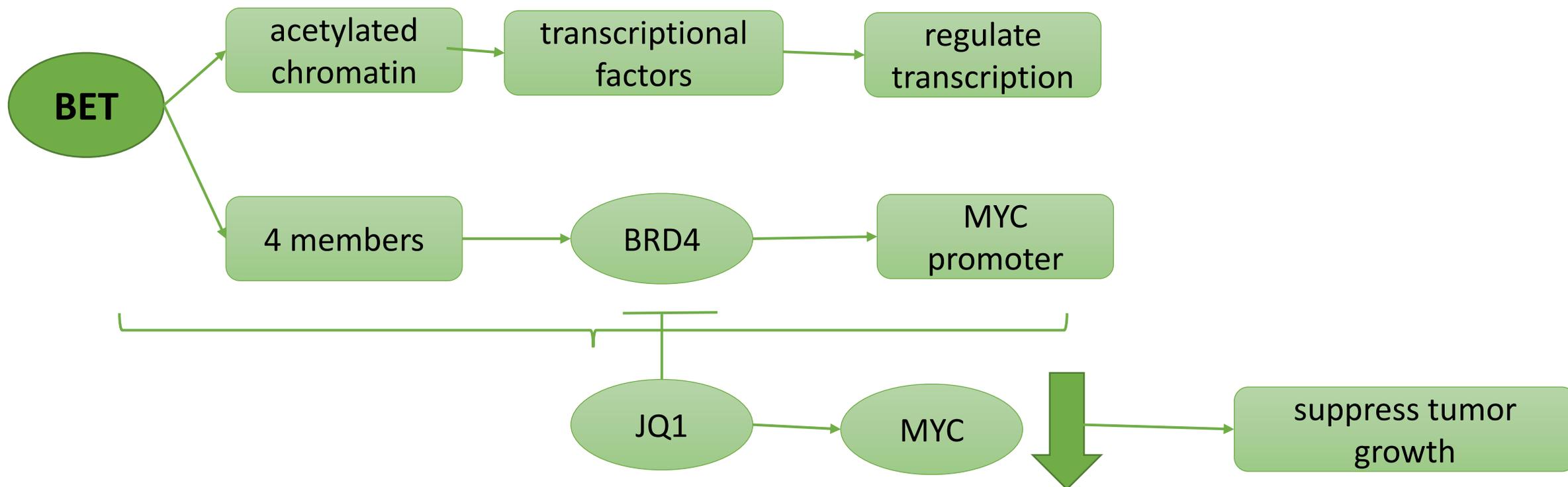


1

Preventing MYC translation

BET inhibitors

Stabilization of G4 structures

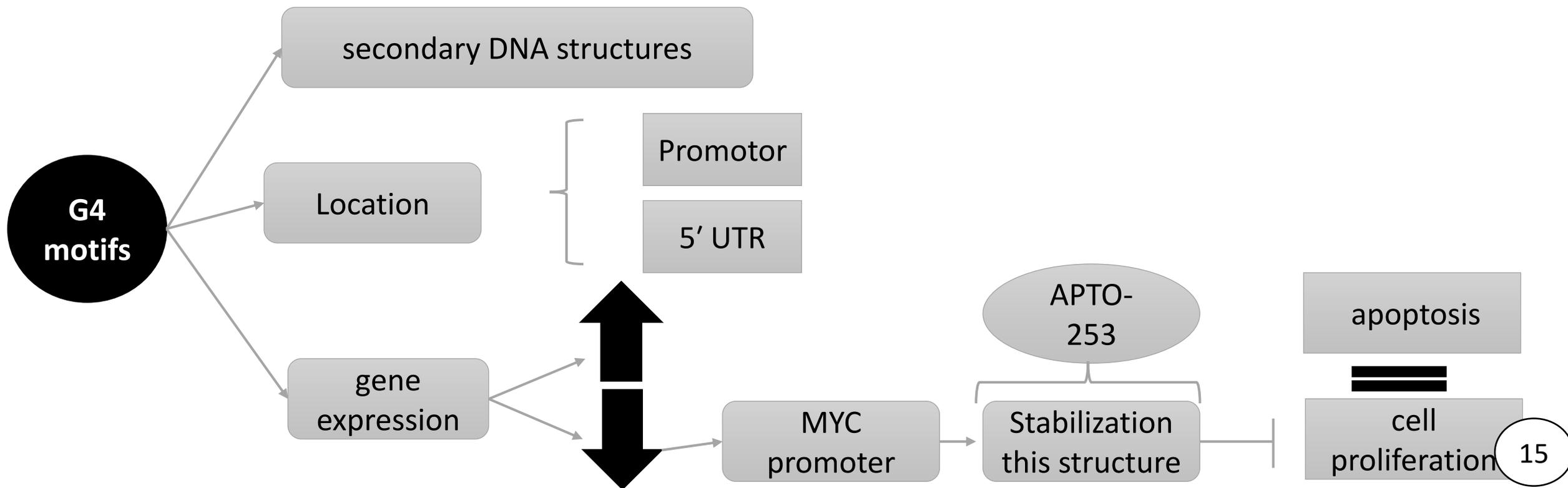


1

Preventing MYC translation

BET inhibitors

Stabilization of G4 structures



3

Blocking MYC-MAX interaction

OmoMYC

- MYC antagonist
- 90-amino acid peptide/mini-protein
- bHLHLZ domain

cancer cell growth

2 mechanisms

OmoMYC /OmoMYC

OmoMYC /MAX

MYC-MAX

DNA

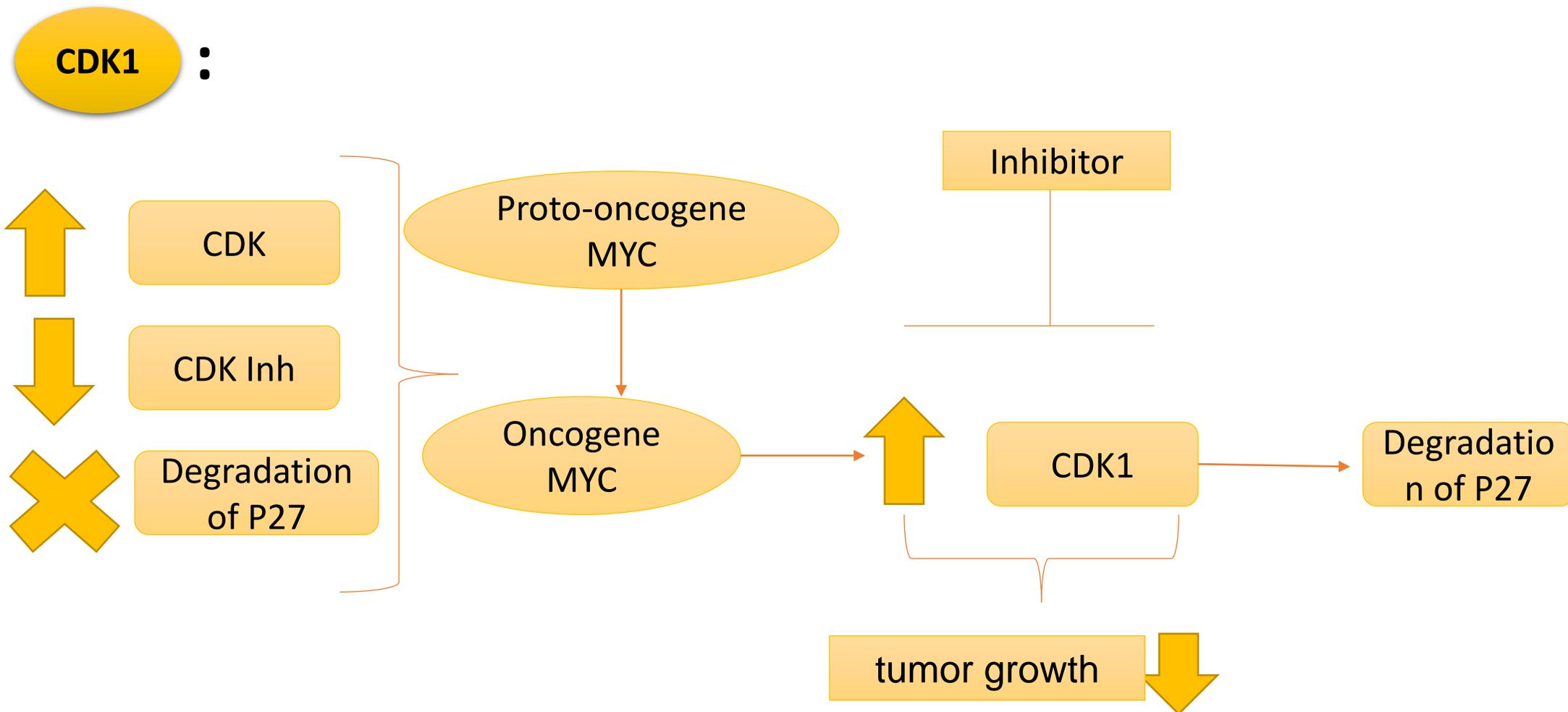
- ability to inhibit the growth of diverse tumor
- minimal side effects on normal tissues

clinical trials

5

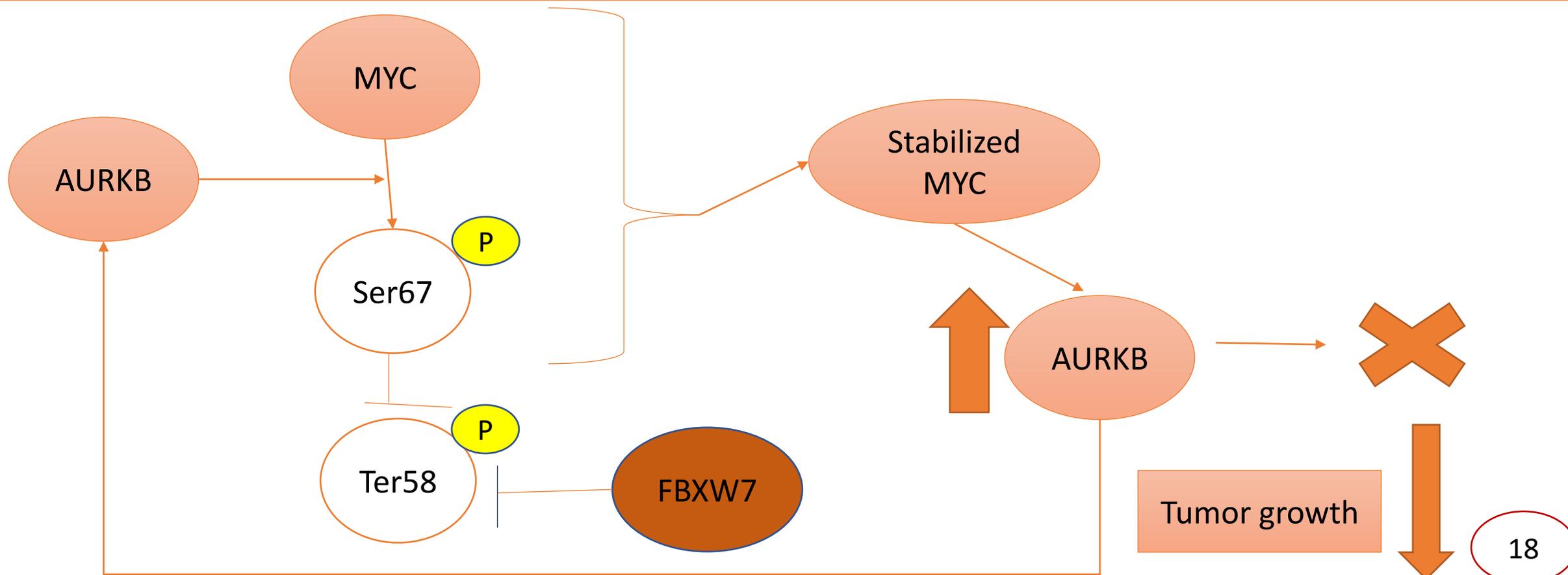
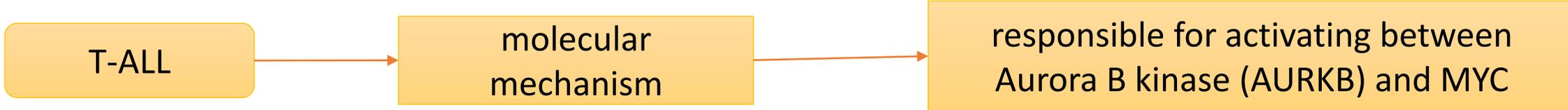
Interfere with MYC target genes

CDK1 :



5

Interfere with MYC target genes



Conclusion



dreamstime.



Thanks for your attention