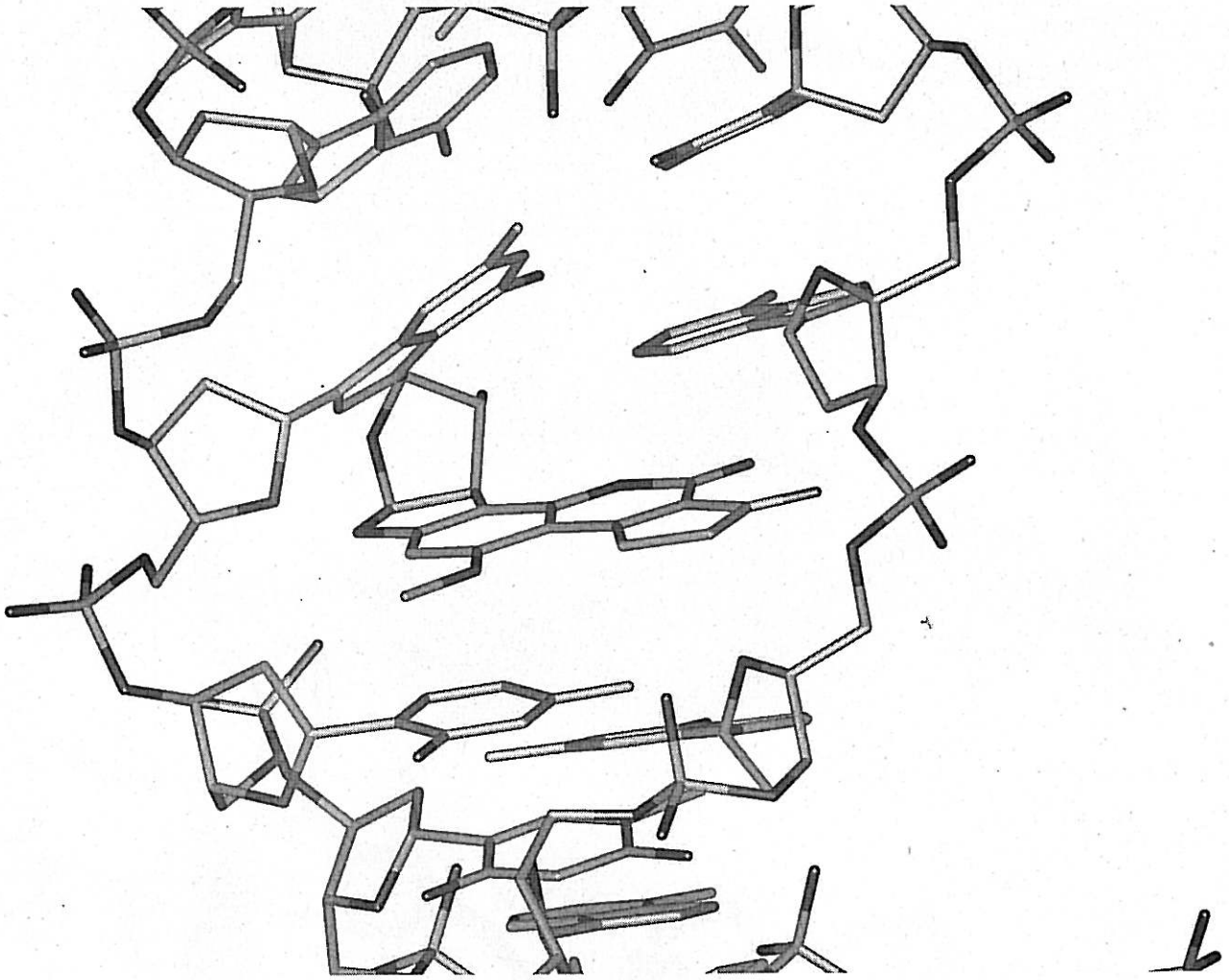
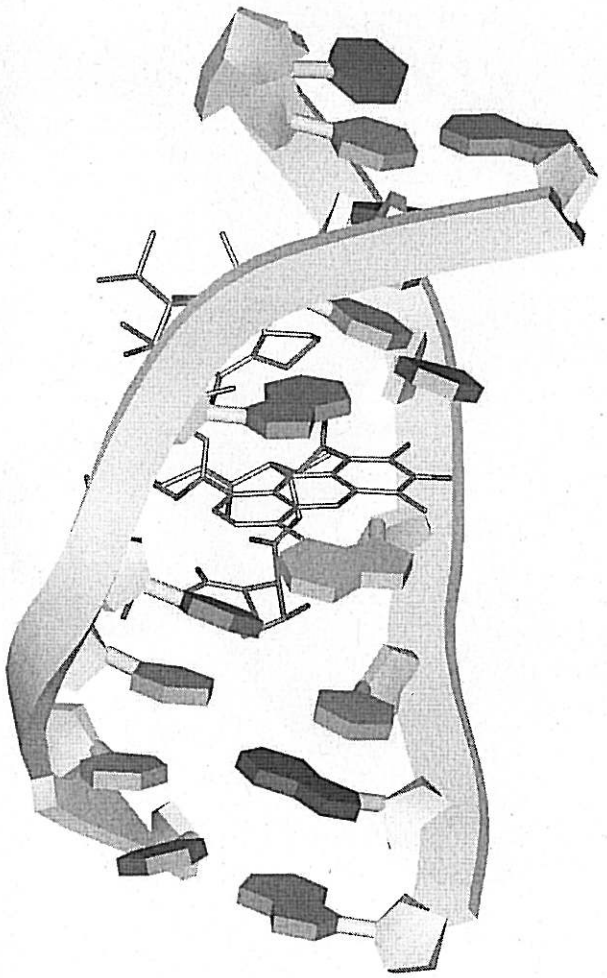
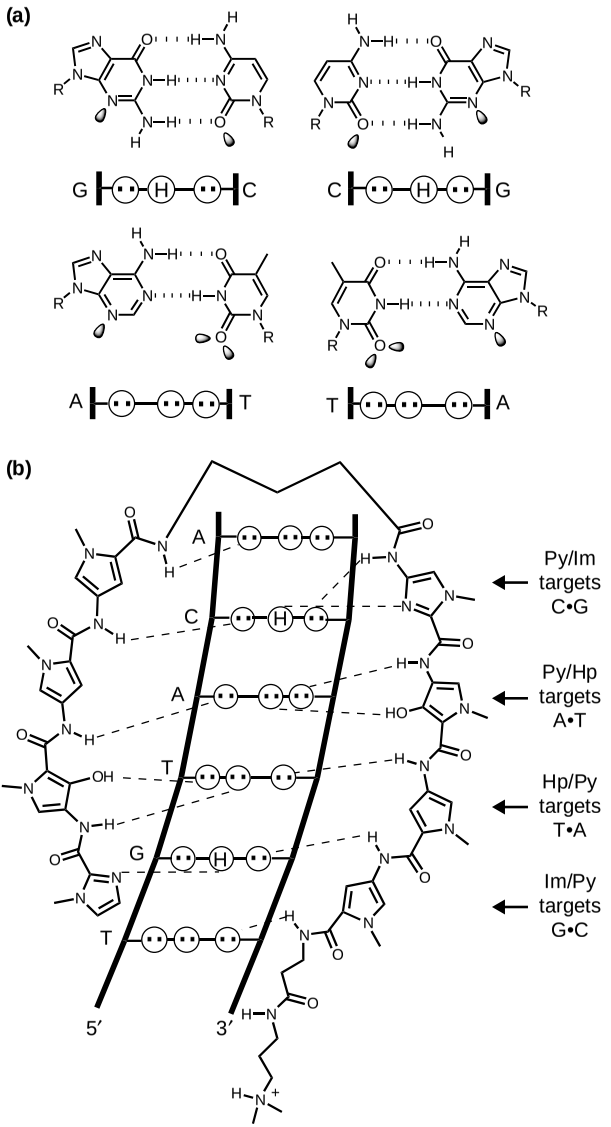
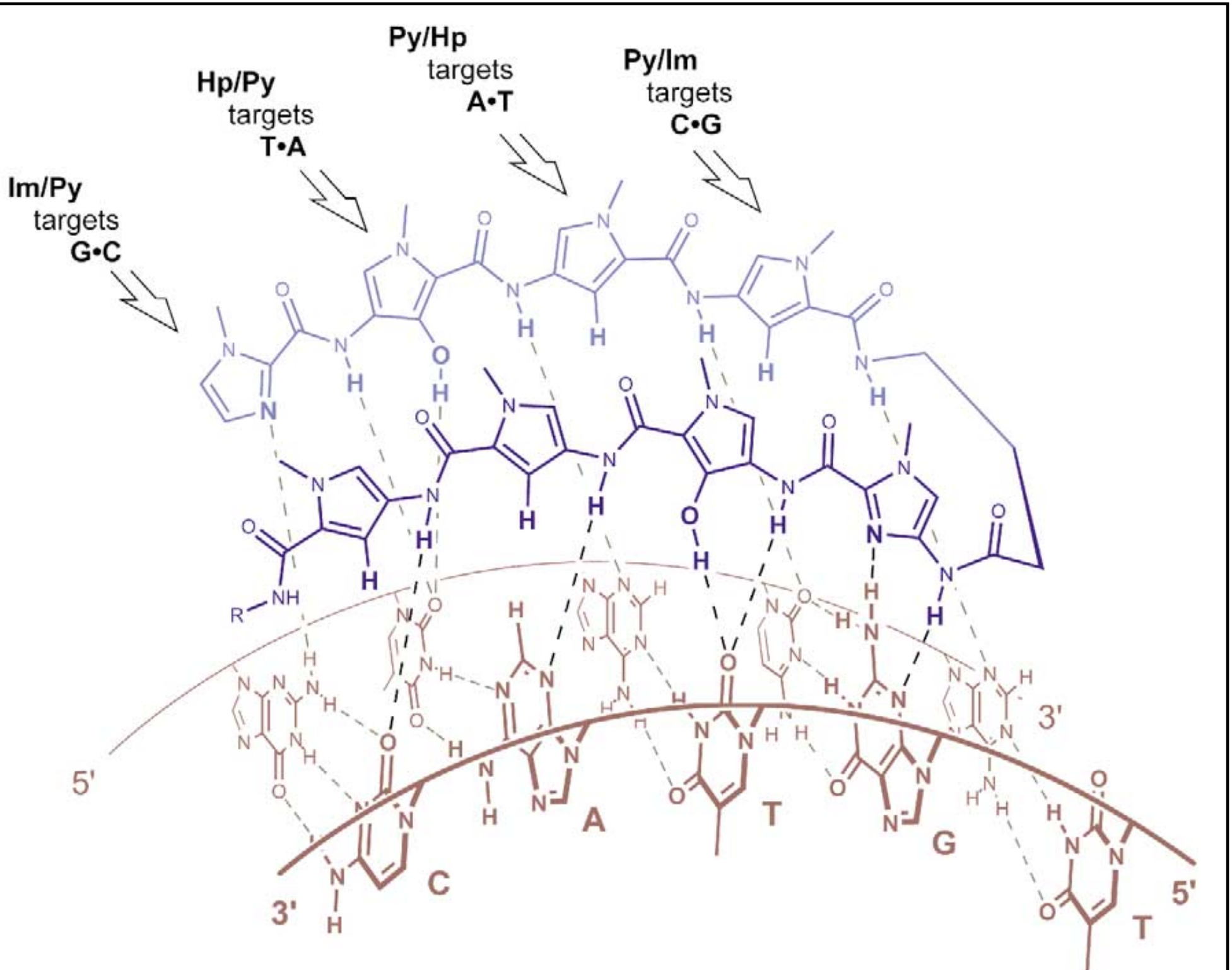
Aflatoxin



Actinomycin




(a)
G
C
C
G
A
T
T
A
(b)
A
C
A
T
G
T
5′
3′
Py/Im
targets
C•G
Py/Hp
targets
A•T
Hp/Py
targets
T•A
Im/Py
targets
G•C

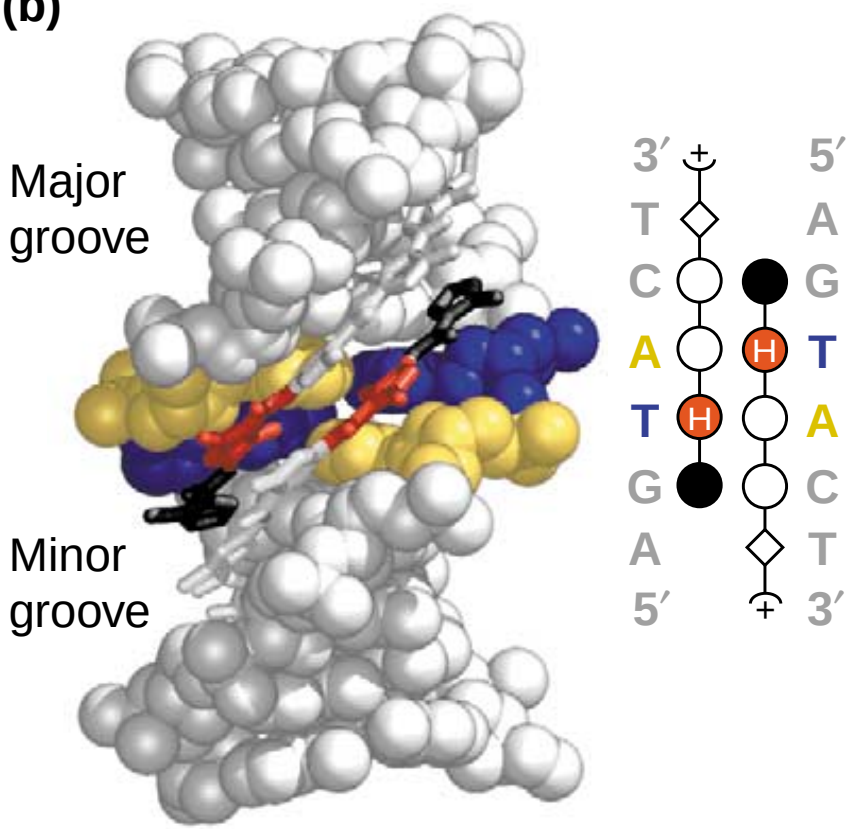



Current Opinion in Structural Biology

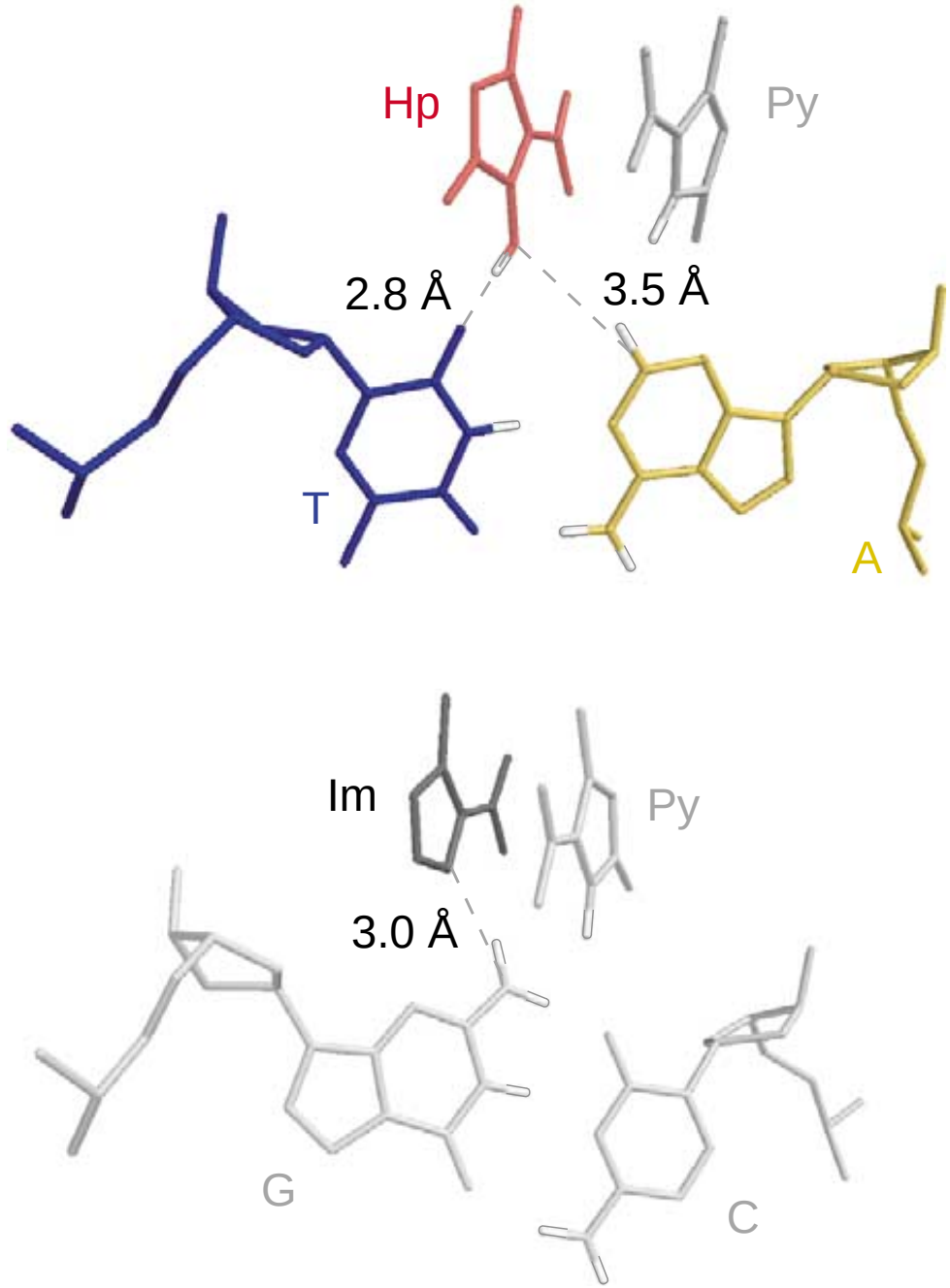
**(a)**

| Pair | G•C | C•G | T•A | A•T |
|---|---|---|---|---|
| Im/Py | + | – | – | – |
| Py/Im | – | + | – | – |
| Hp/Py | – | – | + | – |
| Py/Hp | – | – | – | + |

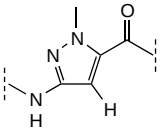
**(b)**




**(c)**

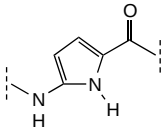



Current Opinion in Structural Biology



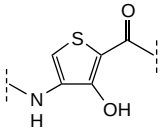
**Pz**

*N*-methylpyrazole



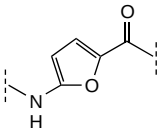
**Nh**

1*H*-pyrrole



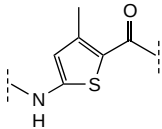
**Ht**

3-hydroxythiophene



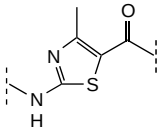
**Fr**

Furan



**Tn**

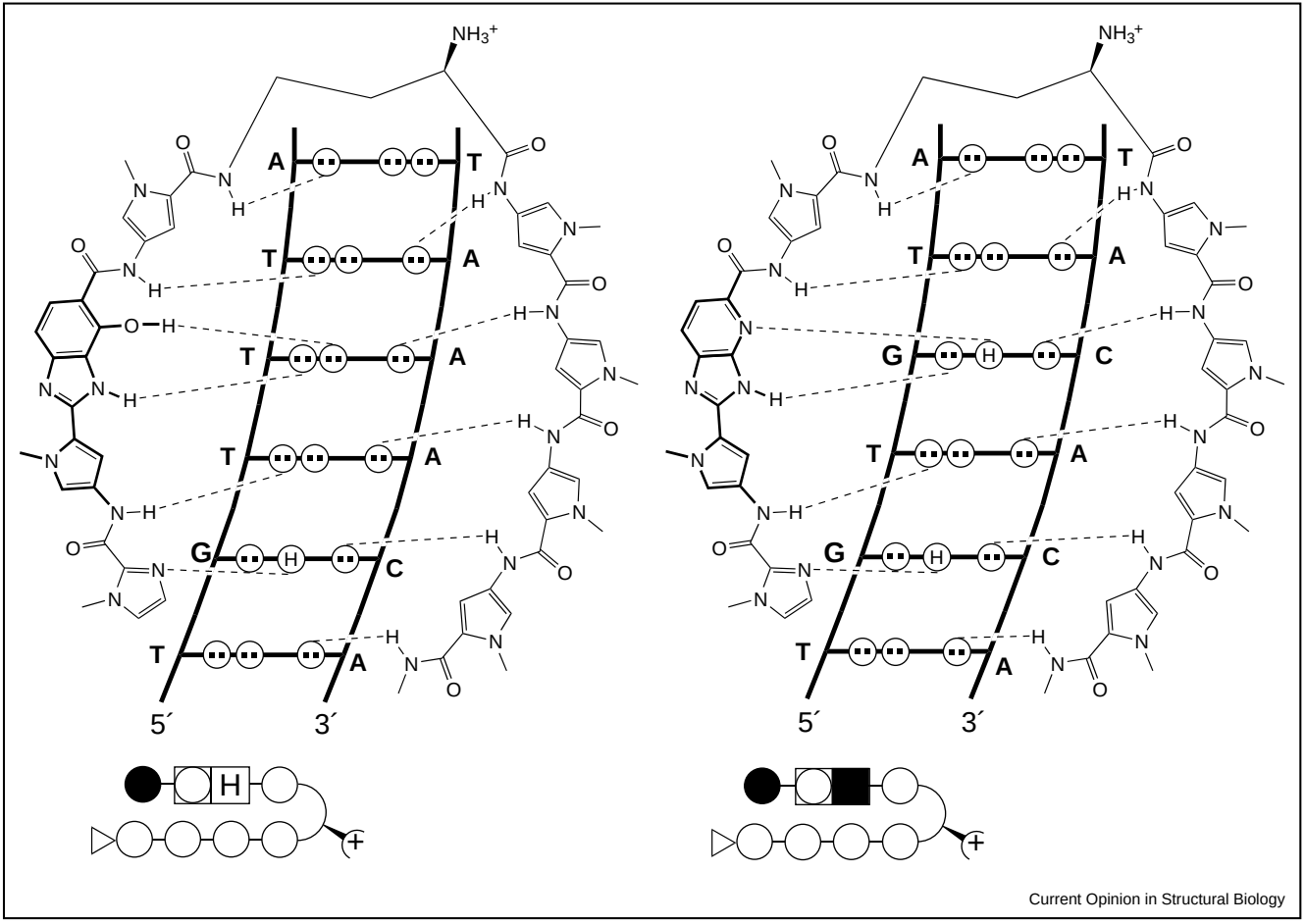
3-methylthiophene



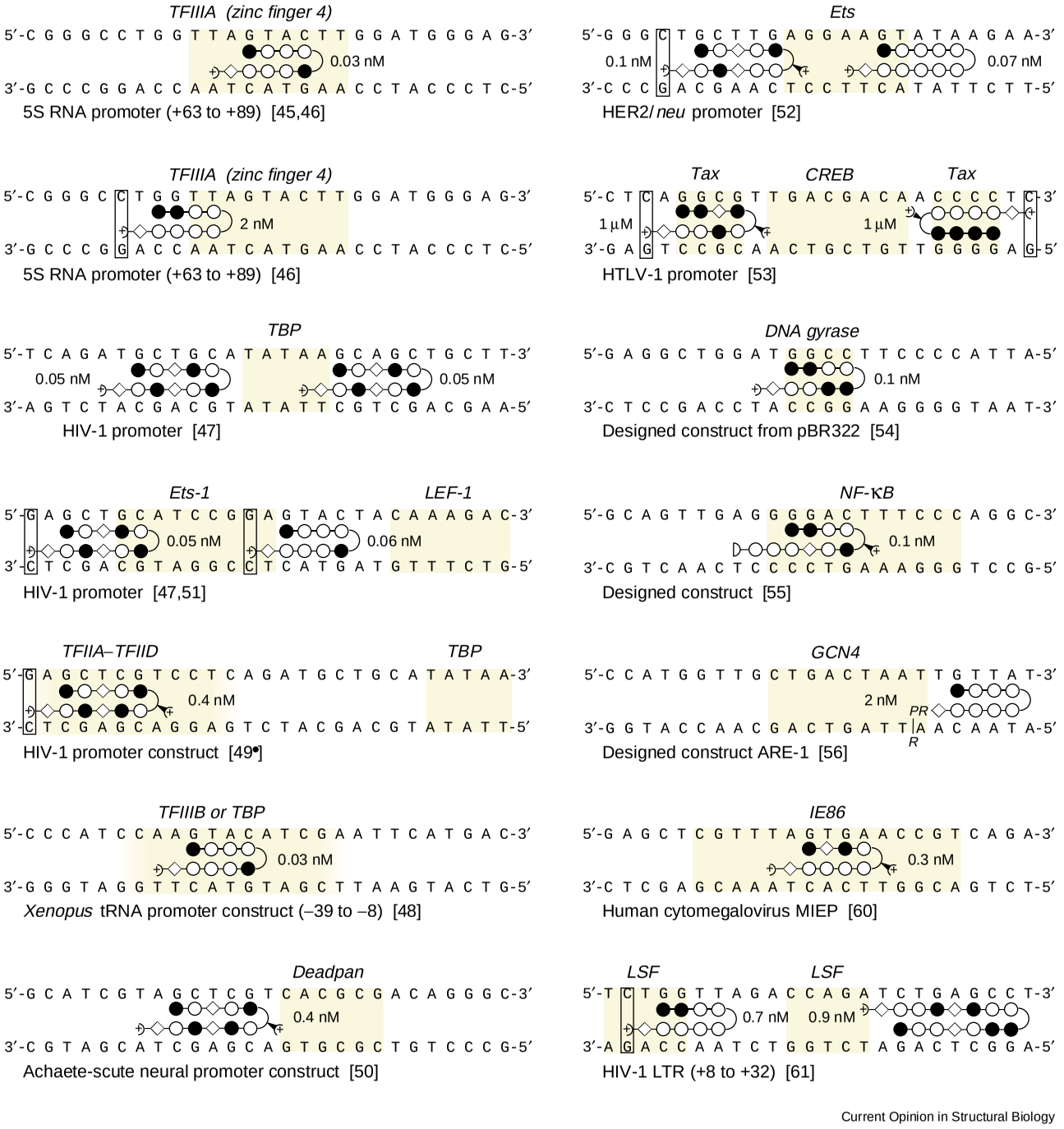
**Th**

4-methylthiazole

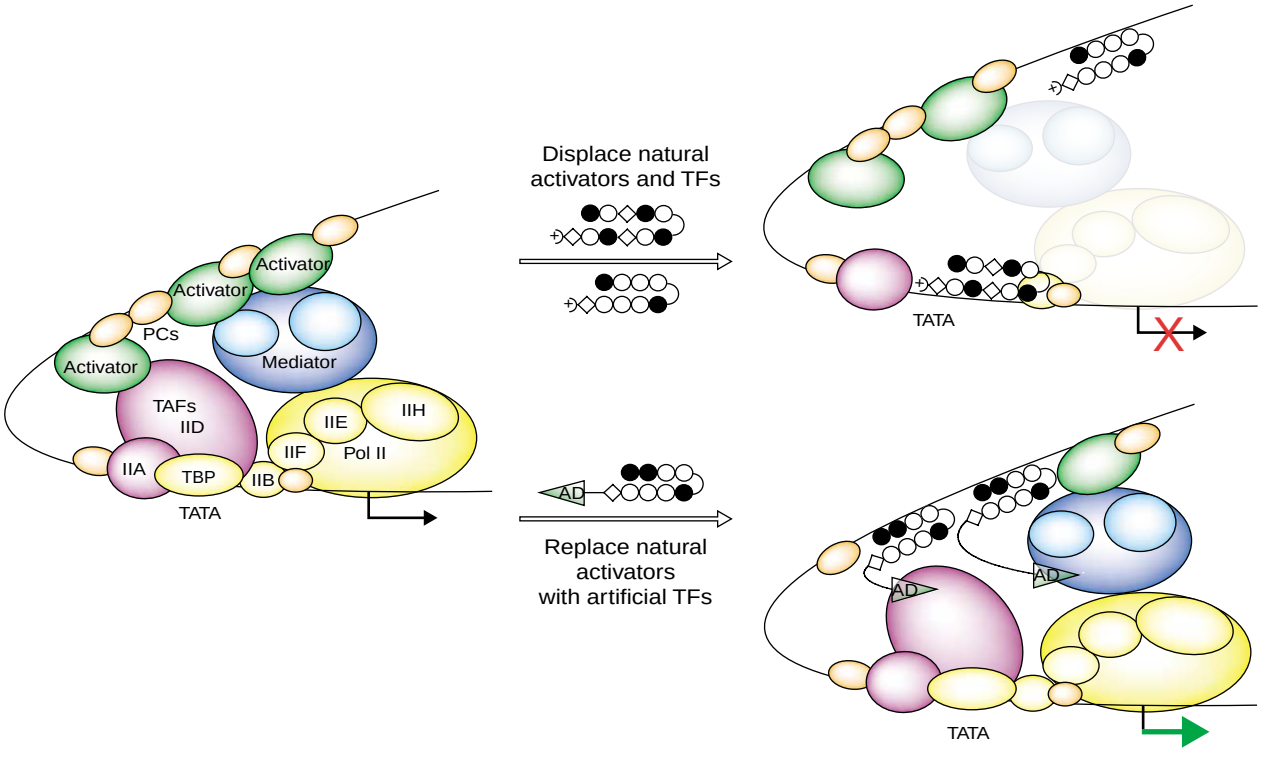
Current Opinion in Structural Biology




Recognition of the DNA minor groove by benzimidazole derivatives. Circles with dots represent lone pairs of N(3) of purines and O(2) of pyrimidines, and circles containing an H represent the 2-amino group of guanine. Putative hydrogen bonds are shown as dashed lines. The dimeric units PyHz and PyIp, at left and at right, respectively, are shown in bold. Schematics of the hairpin polyamides are given below the binding scheme: the rectangle containing an open circle and the letter H represents the PyHz dimer, and the rectangle containing an open circle and a shaded box represents the PyIp dimer. Other symbols are defined in Figure 4.




Examples of DNA-binding proteins that have been inhibited by polyamides. Approximate $K_d$ values are given next to each polyamide. Where available, the values are from experiments conducted on the depicted DNA sequence. The name of the protein is italicized above a shaded box indicating its DNA binding site. Open boxes indicate mismatches between the Dp tail and G,C base pairs [42]. The promoter or construct is identified below the DNA sequence and is followed by the reference number in brackets. The HIV-1 promoter construct, *Xenopus* tRNA promoter construct and Achaete-scute neural promoter construct are sample DNA sequences from studies that employed promoter scanning. Precise binding sites for the TFIIA–TFIID complex and for TFIIIB are not identifiable from promoter scanning. RPR represents an Arg-Pro-Arg C-terminus, and the half circle represents a propanolamine $–NH(CH_2)_3OH$ group. All other symbols are defined in Figure 4.




Current Opinion in Structural Biology