

GT

If this card does not show
the GT logo on the reverse side,
then all the cards are incorrect.
Change the print parameters
and reprint them.

Constructed by
Loren Williams and Nick Hud

Serine
Ser
S

1

Valine
Val
V

2

Cysteine
Cys
C

3

Isoleucine
Ile
I

4

Alanine
Ala
A

5

Threonine
Thr
T

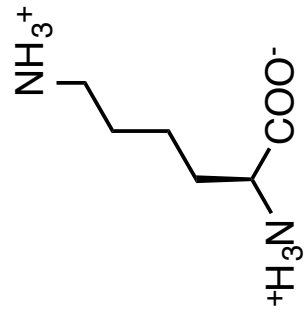
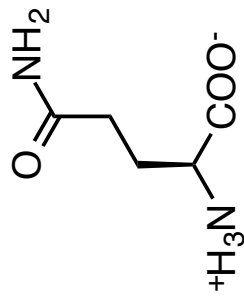
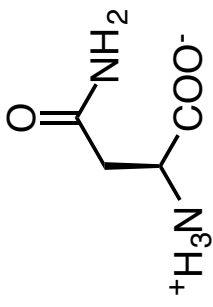
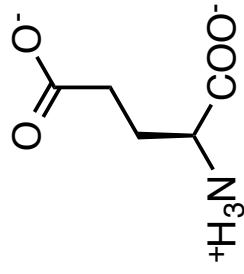
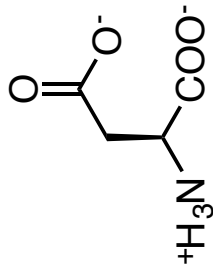
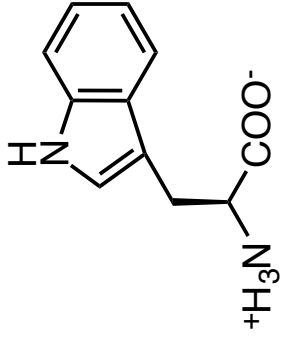
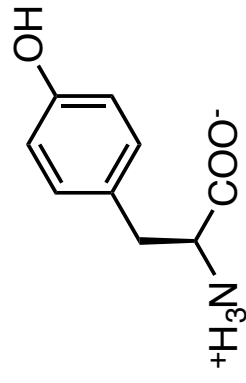
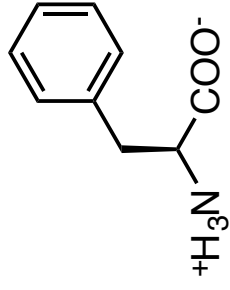
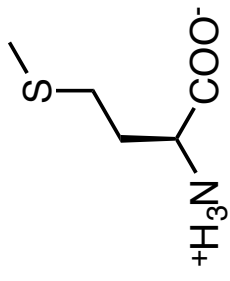
6

Leucine
Leu
L

7

Glycine
Gly
G

8



Lysine
Lys
K

9

Glutamic Acid
Glu
E

10

Tyrosine
Tyr
Y

11

Glutamine
Gln
Q

12

Aspartic Acid
Asp
D

13

Phenylalanine
Phe
F

14

Asparagine
Asn
N

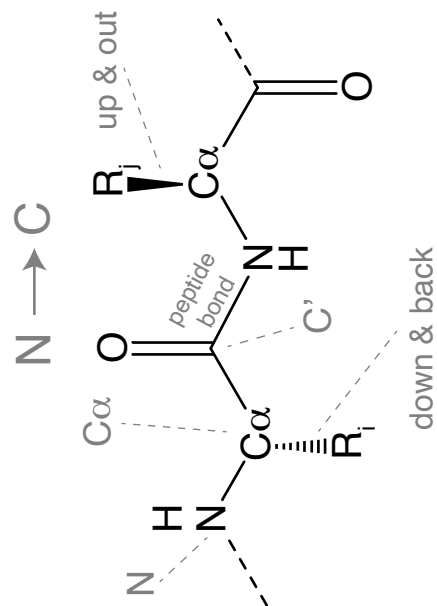
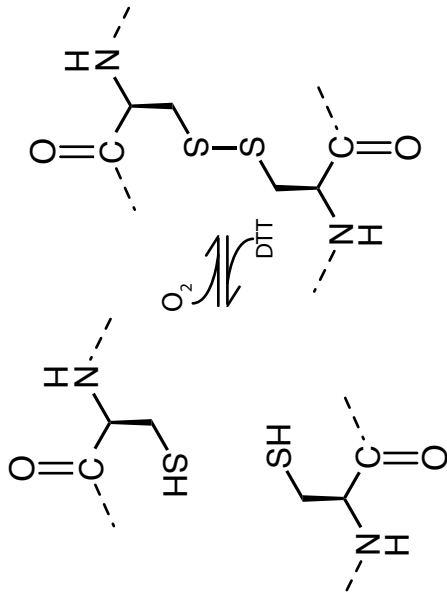
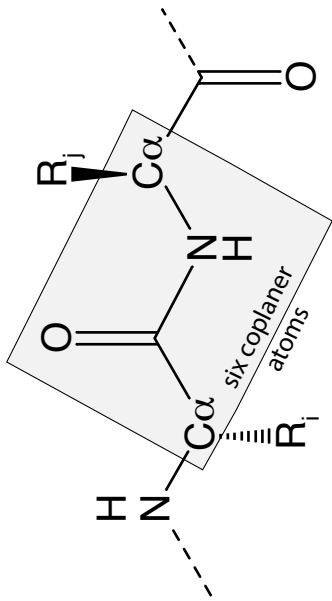
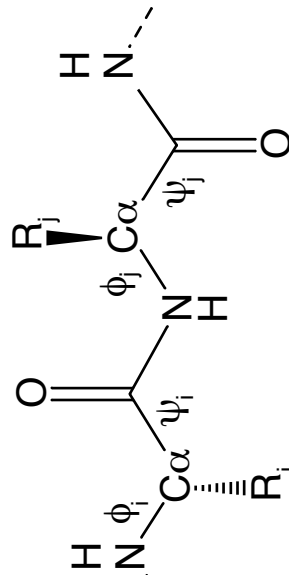
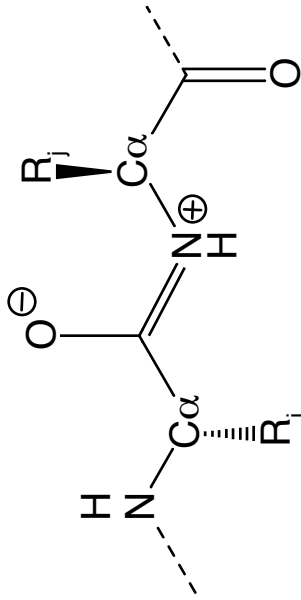
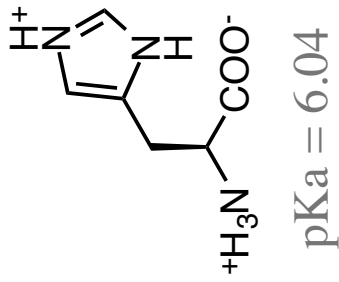
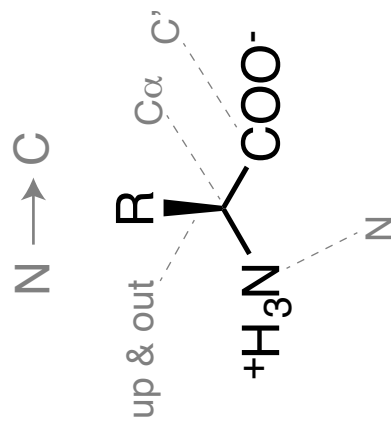
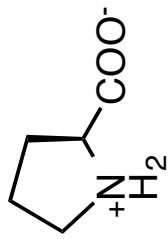
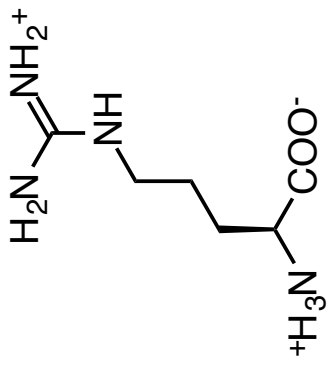
15

Tryptophan
Trp
W

16

Methionine
Met
M

17



Peptide Bond

21

Peptide Bond
 $\phi\psi$

22

L- α -Amino Acid

18

Disulfide Formation

23

Peptide Bond
resonance

24

Proline
Pro
P

19

Peptide Bond
coplaner atoms

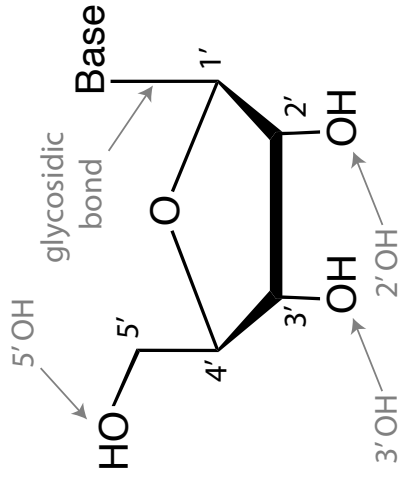
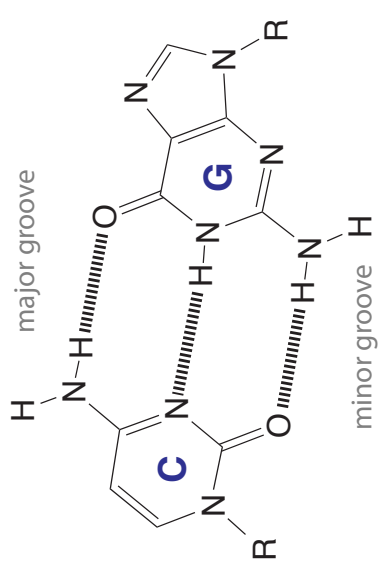
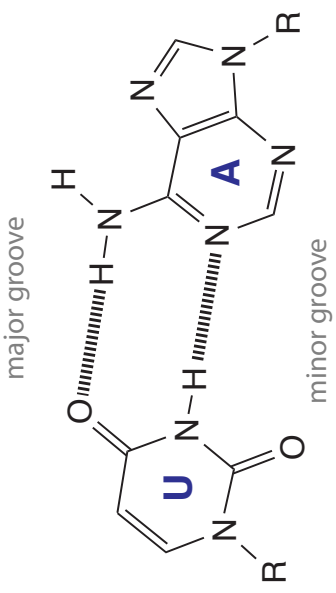
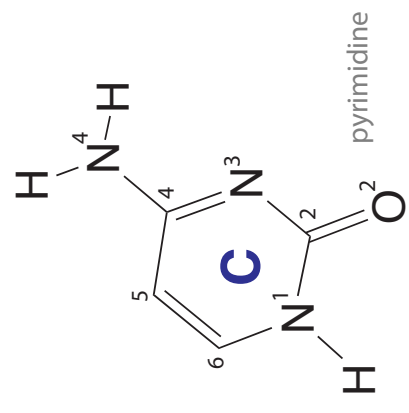
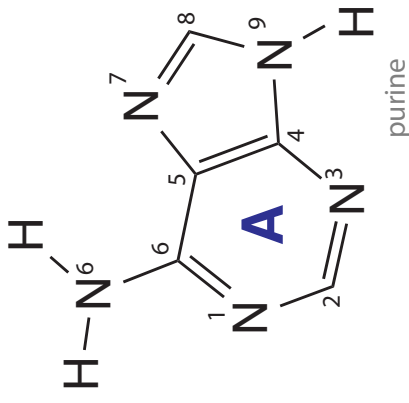
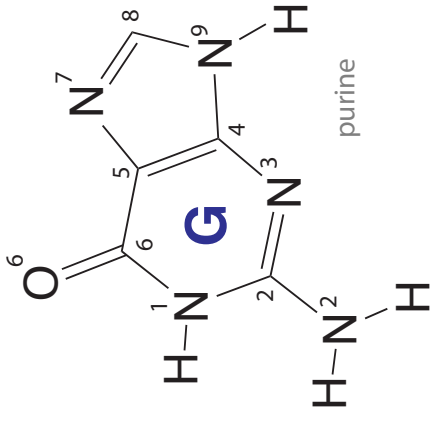
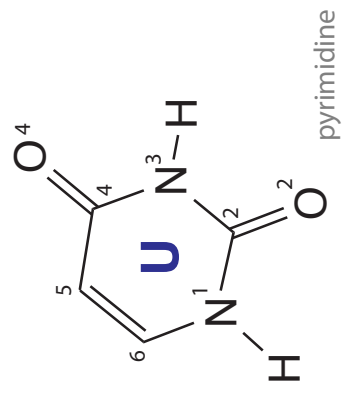
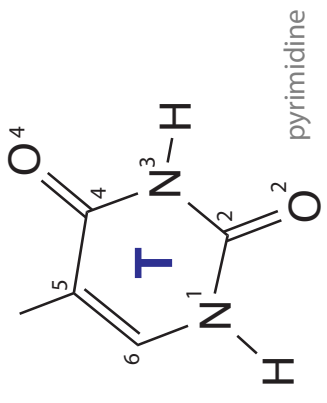
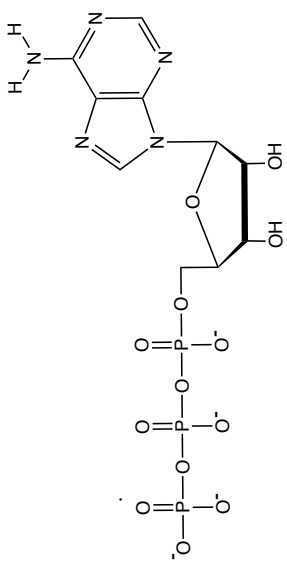
25

Histidine
His
H
pKa

26

Arginine
Arg
R

20



Nucleoside
atom numbers

27

Cytosine
atom numbers

28

Uracil
atom numbers

29

C-G Base Pair
major/minor grooves

30

Adenine
atom numbers

31

Thymine
atom numbers

32

U-A Base Pair
major/minor grooves

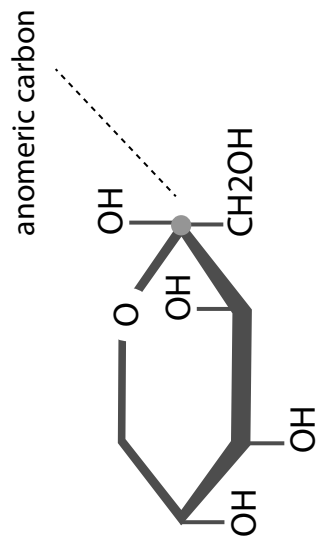
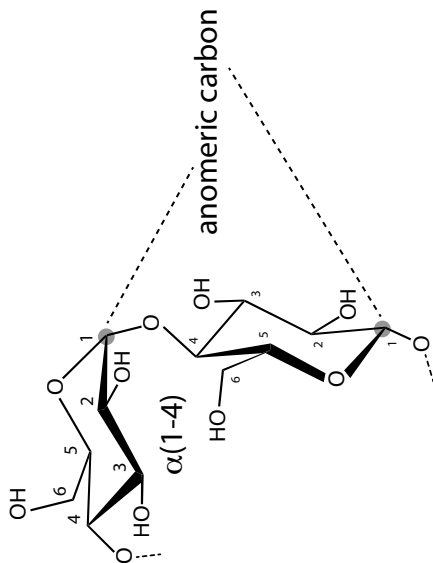
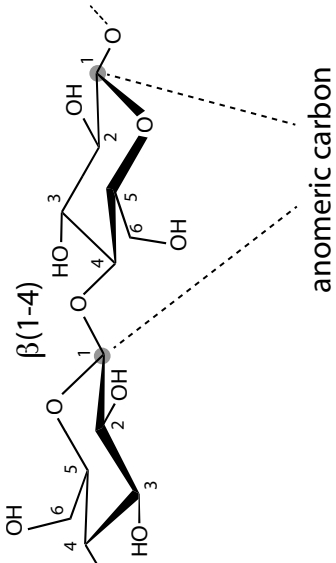
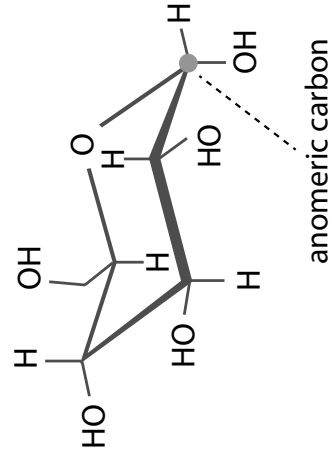
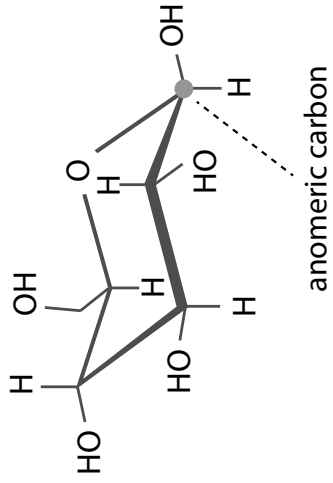
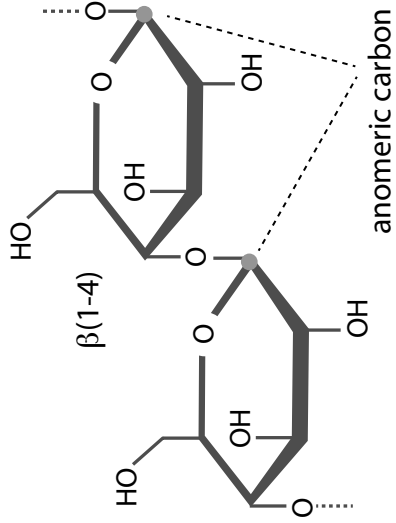
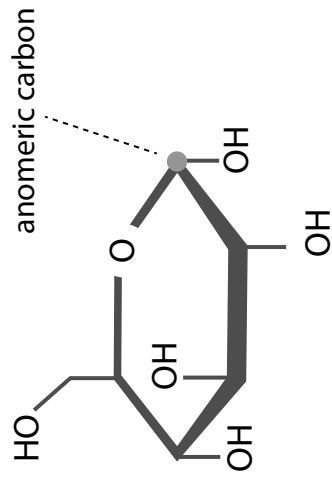
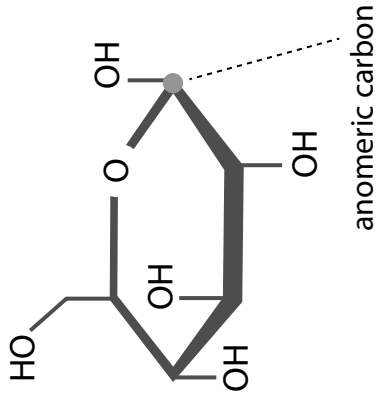
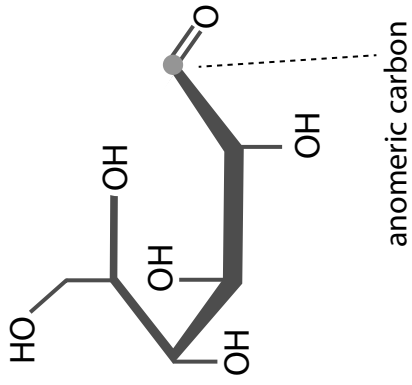
33

Guanine
atom numbers

34

ATP

35



Fructose
 β -D-fructopyranose
(Haworth)

36

α -D-Glucose
(chair)

37

α -D-Glucose
(Haworth)

38

Amylose
(chair)

39

β -D-Glucose
(chair)

40

β -D-Glucose
(Haworth)

41

Cellulose
(chair)

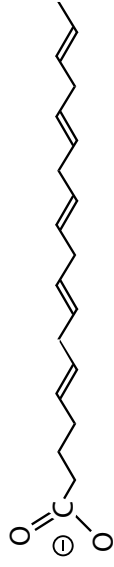
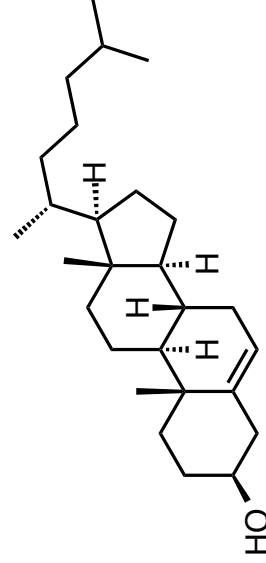
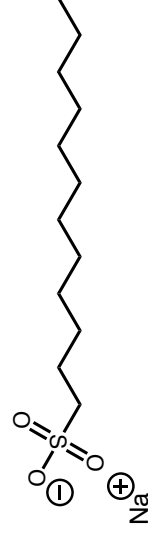
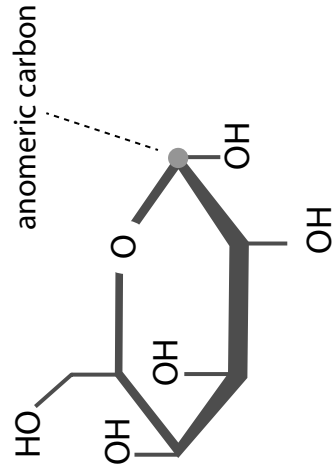
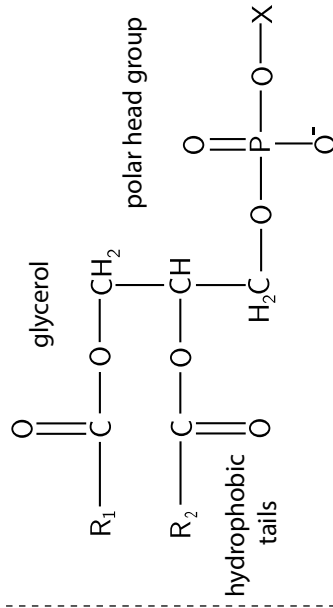
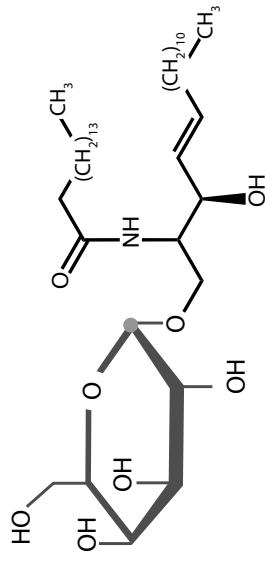
42

Cellulose
(Haworth)

43

D-Glucose
(Haworth)

44



Short range repulsion
 Electrostatic (interger charges)
 Dipolar
 Dipole-dipole
 Dipole-induced dipole
 Charge-dipole
 London Dispersion
 Cation- π
 Hydrogen bonding

α -D-Galactose
(Haworth)

44

Molecular Interactions
in a
globular protein

46

Cholesterol

45

Fatty Acid
(EPA:
eicosapentaenoic acid)

49

Glycerophospholipid

47

SDS
(sodium dodecyl sulfate)

48

Galactoceramide
(cerebroside)

50

51

52