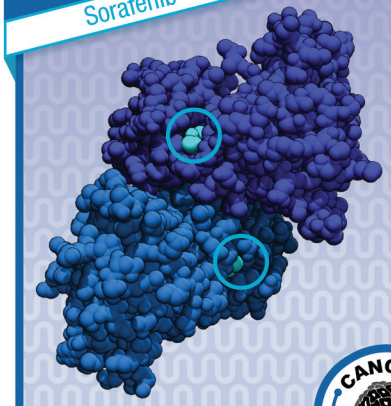
CANCER

PDB Structure 1UWH

B-RAF Protein Kinase

Sorafenib



2

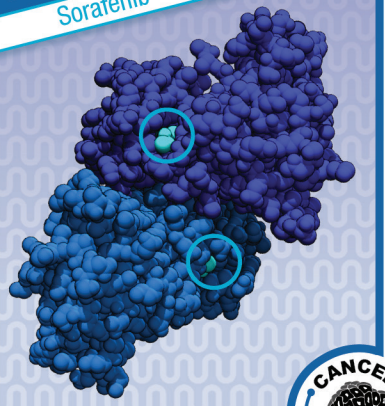
CANCER

CANCER

PDB Structure 1UWH

B-RAF Protein Kinase

Sorafenib



1

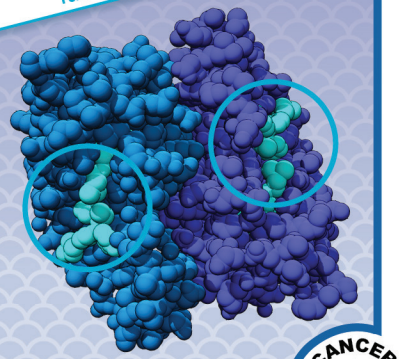
CANCER

CANCER

PDB Structure 2FSZ

Estrogen Receptor Beta

Tamoxifen



2

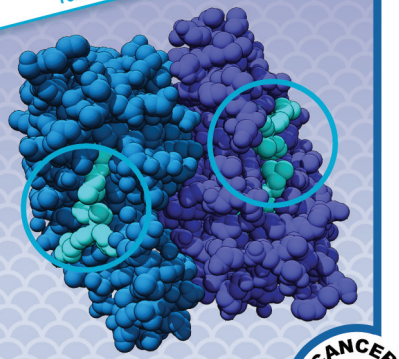
CANCER

CANCER

PDB Structure 2FSZ

Estrogen Receptor Beta

Tamoxifen



1

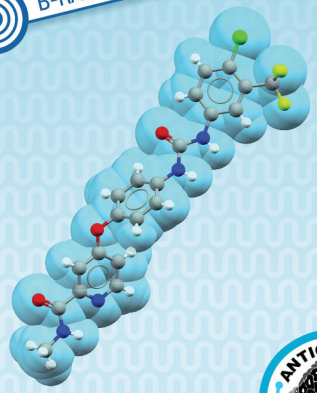
CANCER

ANTICANCER

CSD Refcode AKENOU

Sorafenib

B-RAF Protein Kinase



2

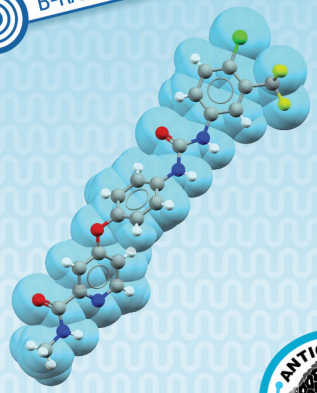
ANTICANCER

ANTICANCER

CSD Refcode AKENOU

Sorafenib

B-RAF Protein Kinase



1

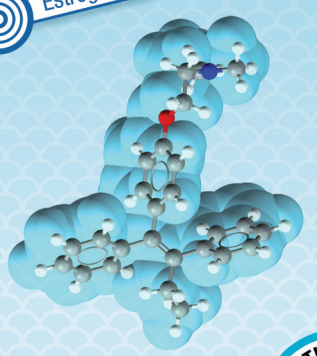
ANTICANCER

ANTICANCER

CSD Refcode TTAMOX01

Tamoxifen

Estrogen Receptor Beta



2

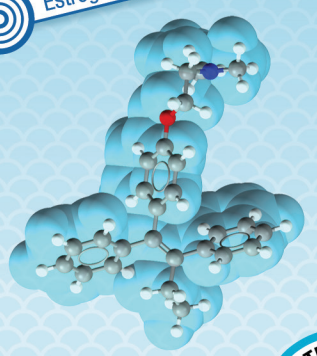
ANTICANCER

ANTICANCER

CSD Refcode TTAMOX01

Tamoxifen

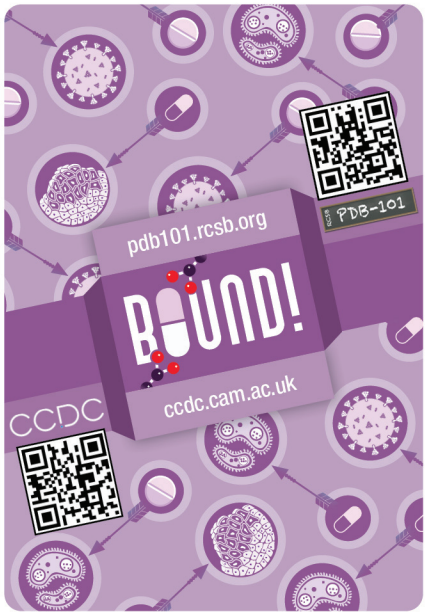
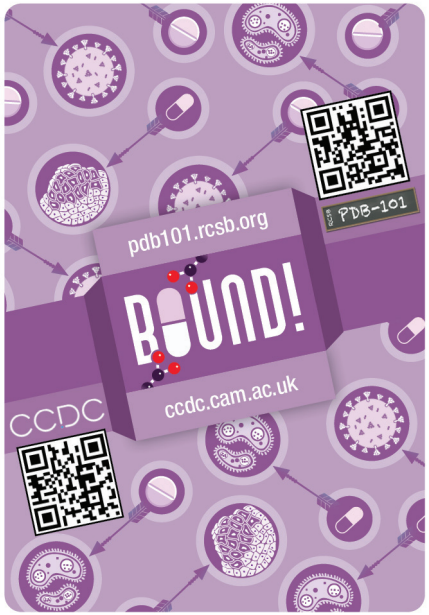
Estrogen Receptor Beta



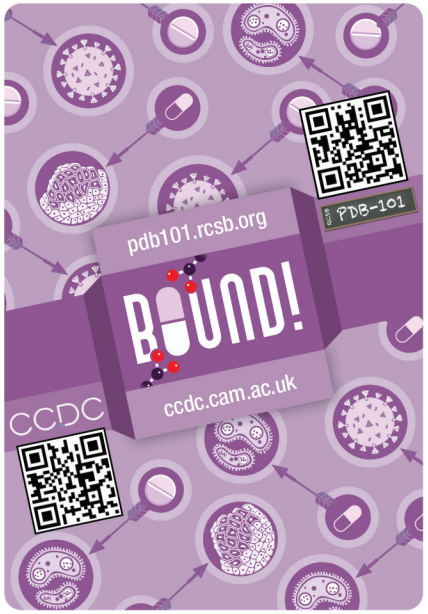
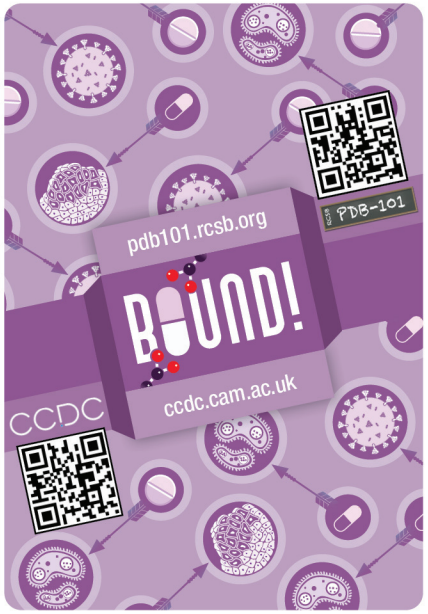
1

ANTICANCER


pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

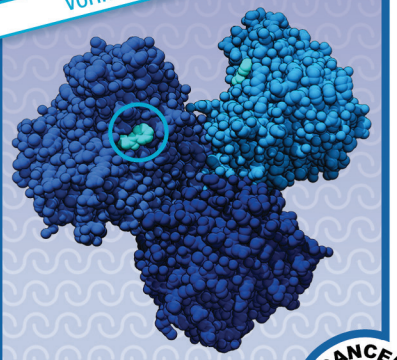
pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

CANCER

PDB Structure 4LXZ

Histone Deacetylase 2

Vorinostat



2

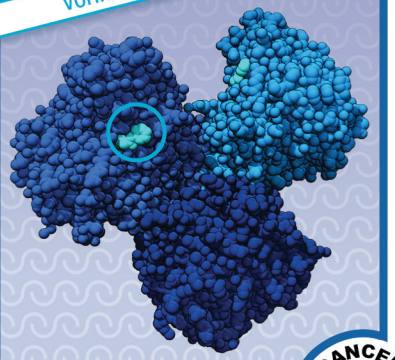
CANCER

CANCER

PDB Structure 4LXZ

Histone Deacetylase 2

Vorinostat



1

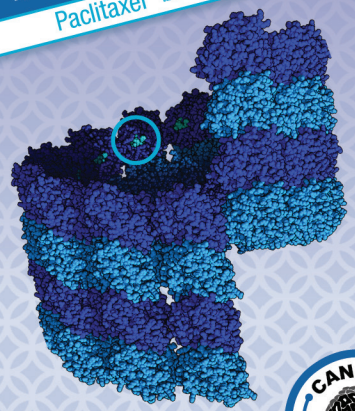
CANCER

CANCER

PDB Structure 5SYF

Microtubule (Tubulin-beta)

Paclitaxel



2

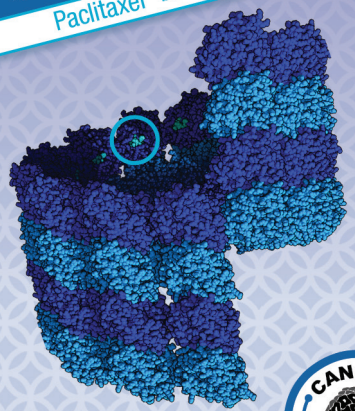
CANCER

CANCER

PDB Structure 5SYF

Microtubule (Tubulin-beta)

Paclitaxel



1

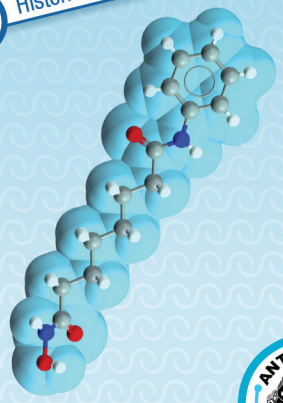
CANCER

ANTICANCER

CSD Refcode IQILAW

Vorinostat

Histone Deacetylase 2



2

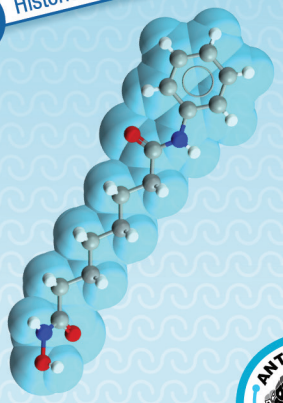
ANTICANCER

ANTICANCER

CSD Refcode IQILAW

Vorinostat

Histone Deacetylase 2



1

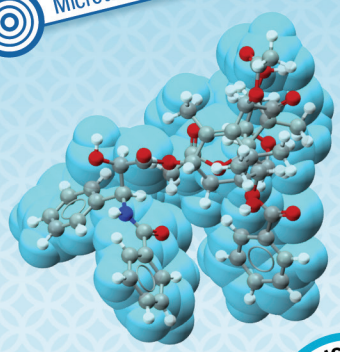
ANTICANCER

ANTICANCER

CSD Refcode ARISOK

Paclitaxel

Microtubule (Tubulin-beta)



2

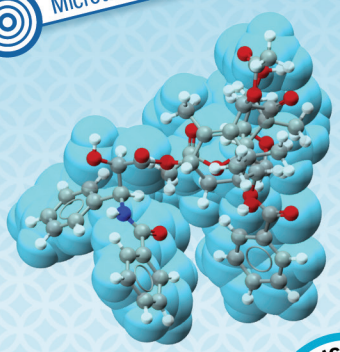
ANTICANCER

ANTICANCER

CSD Refcode ARISOK

Paclitaxel

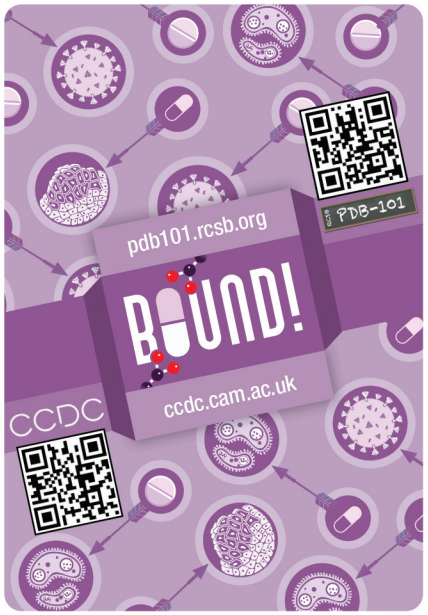
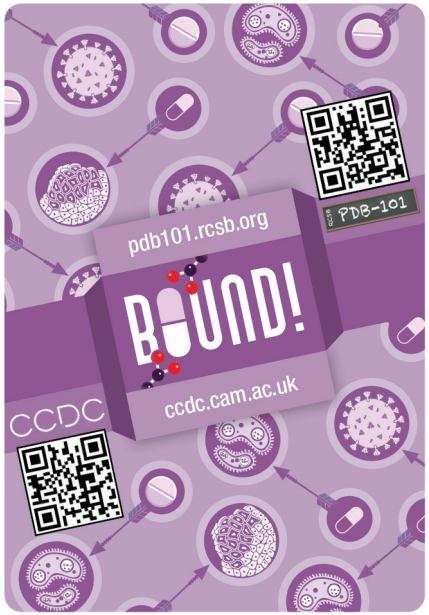
Microtubule (Tubulin-beta)



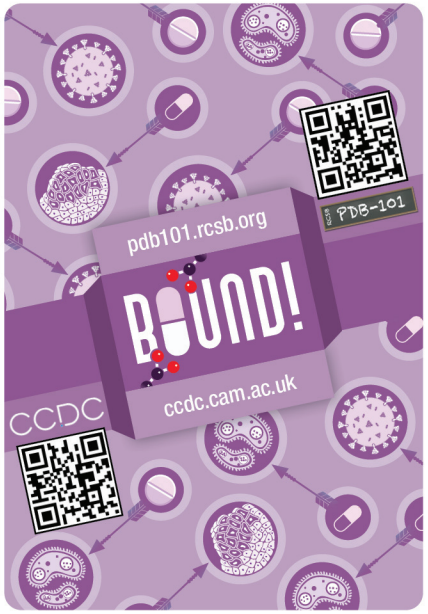
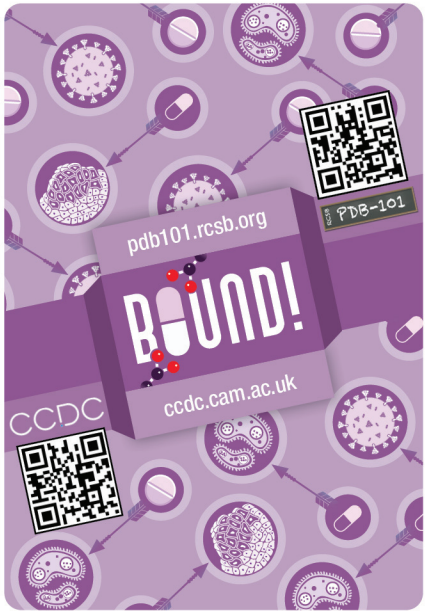
1

ANTICANCER


pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

BACTERIA

PDB Structure 6Q9N

Penicillin-binding Protein

Piperacillin



2

BACTERIA

BACTERIA

PDB Structure 6Q9N

Penicillin-binding Protein

Piperacillin



1

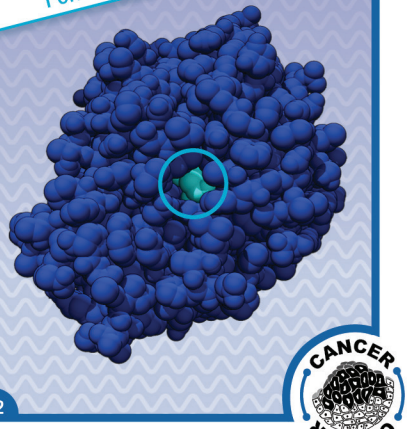
BACTERIA

CANCER

PDB Structure 6N9M

Adenosine Deaminase

Pentostatin



2

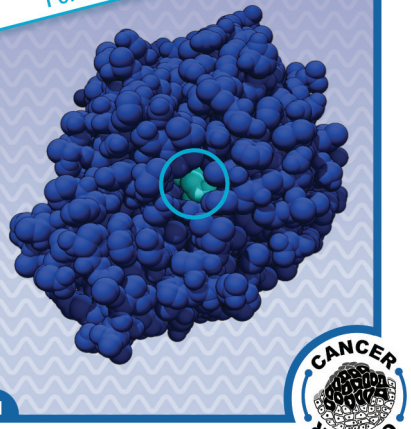
CANCER

CANCER

PDB Structure 6N9M

Adenosine Deaminase

Pentostatin



1

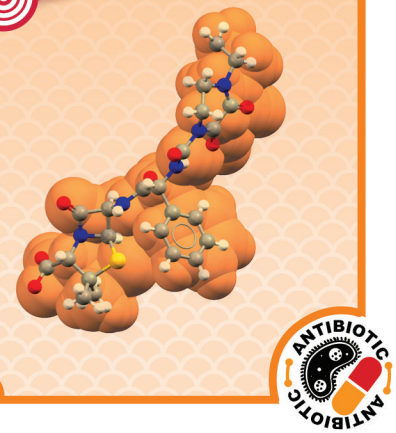
CANCER

ANTIBIOTIC

CSD Refcode PIPCIL

Piperacillin

Penicillin-binding Protein



2

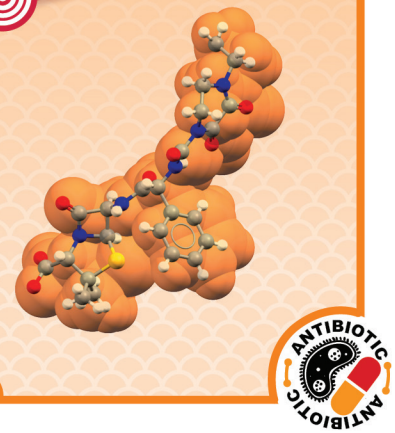
ANTIBIOTIC

ANTIBIOTIC

CSD Refcode PIPCIL

Piperacillin

Penicillin-binding Protein



1

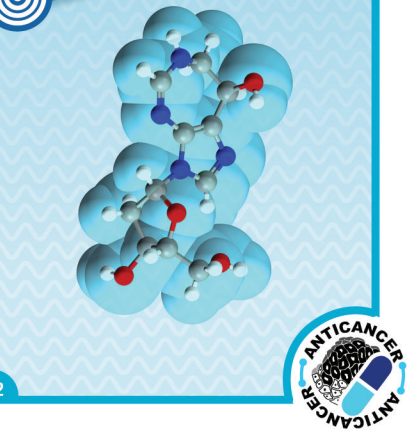
ANTIBIOTIC

ANTICANCER

CSD Refcode DFIMZP01

Pentostatin

Adenosine Deaminase



2

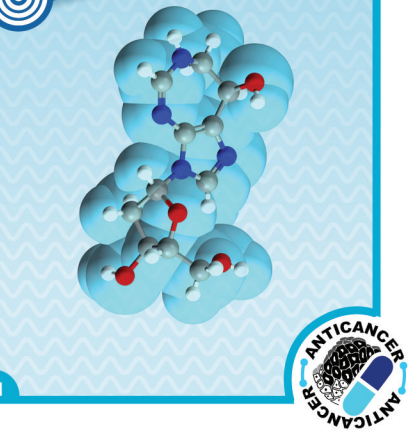
ANTICANCER

ANTICANCER

CSD Refcode DFIMZP01

Pentostatin

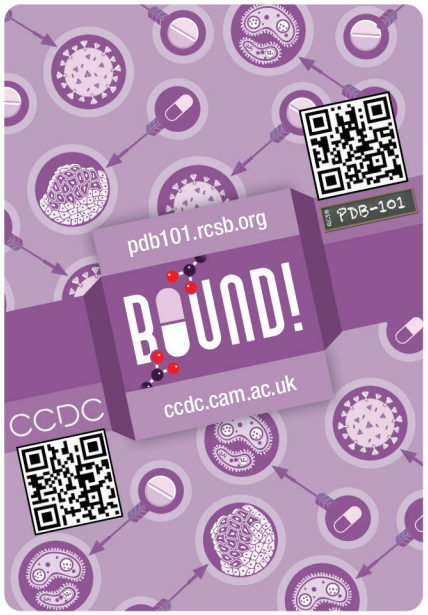
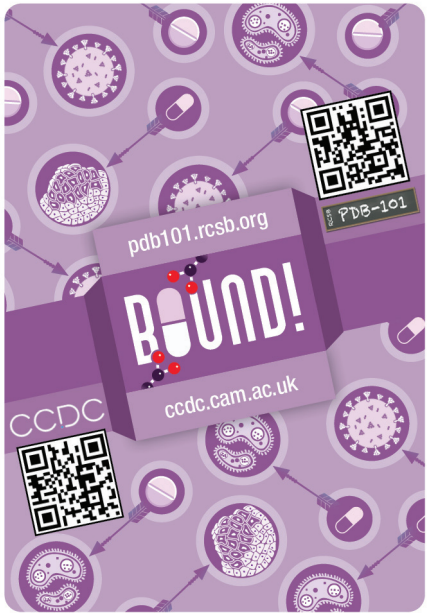
Adenosine Deaminase



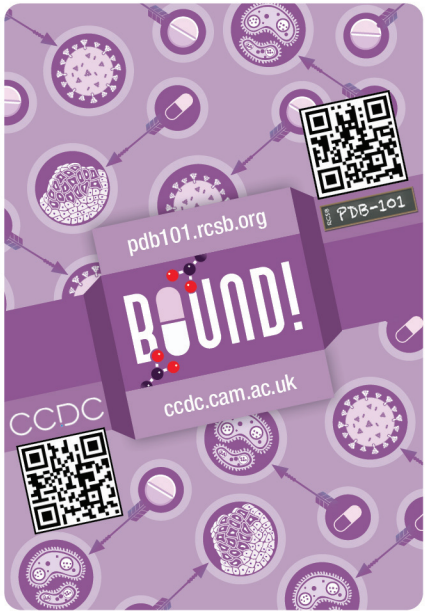
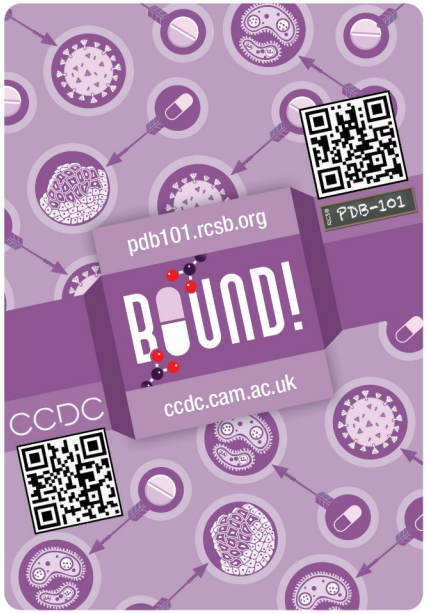
1

ANTICANCER


pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

BACTERIA

PDB Structure 7JGA

Bacterial ATP Synthase

Bedaquiline



2

BACTERIA

BACTERIA

PDB Structure 7JGA

Bacterial ATP Synthase

Bedaquiline



1

BACTERIA

BACTERIA

PDB Structure 2A69

Bacterial RNA Polymerase

Rifapentine



2

BACTERIA

BACTERIA

PDB Structure 2A69

Bacterial RNA Polymerase

Rifapentine



1

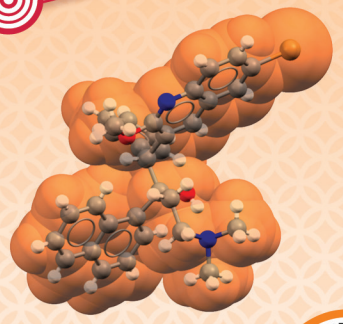
BACTERIA

ANTIBIOTIC

CSD Refcode KIDWAW

Bedaquiline

Bacterial ATP Synthase



2

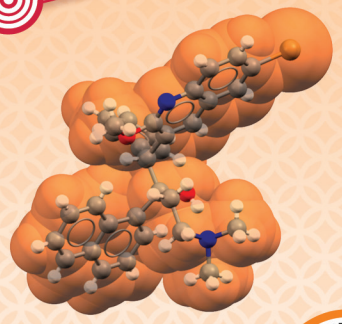
ANTIBIOTIC

ANTIBIOTIC

CSD Refcode KIDWAW

Bedaquiline

Bacterial ATP Synthase



1

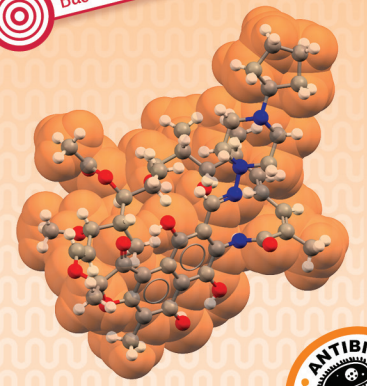
ANTIBIOTIC

ANTIBIOTIC

CSD Refcode MAFLAI

Rifapentine

Bacterial RNA Polymerase



2

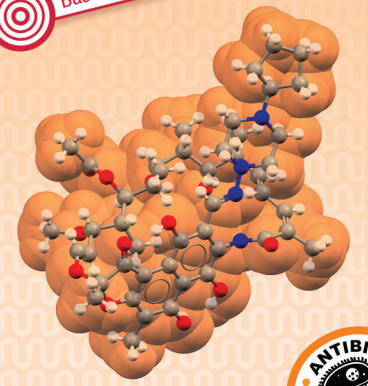
ANTIBIOTIC

ANTIBIOTIC

CSD Refcode MAFLAI

Rifapentine

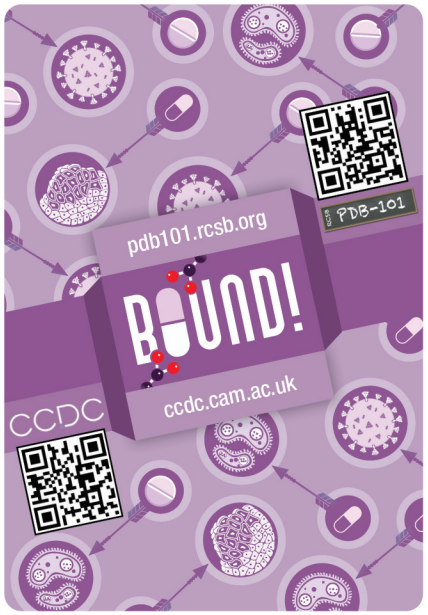
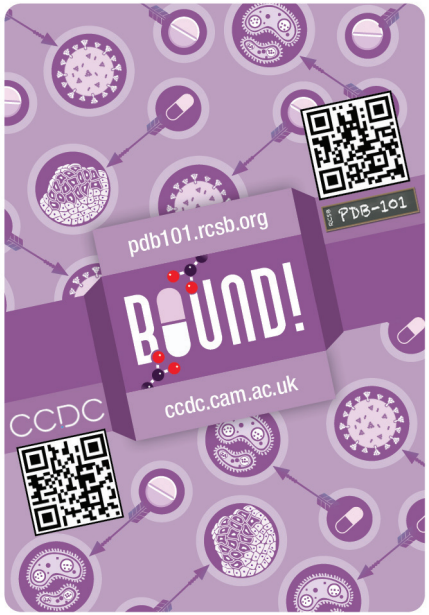
Bacterial RNA Polymerase



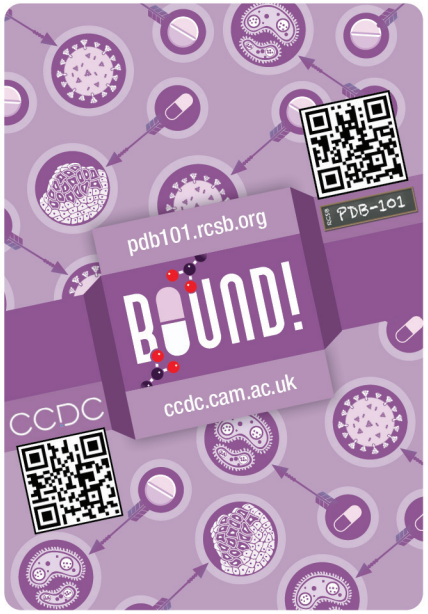
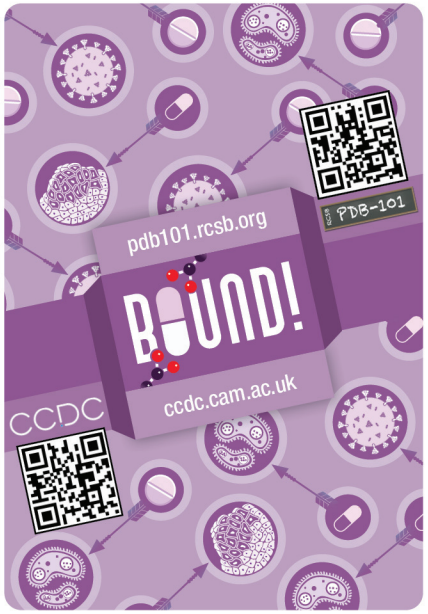
1

ANTIBIOTIC


pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

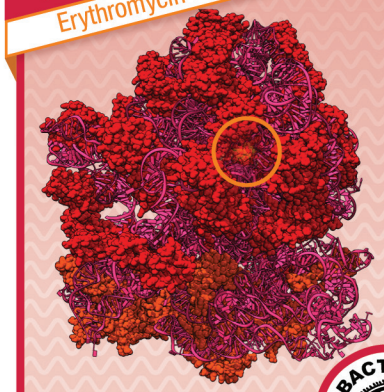
pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

BACTERIA

PDB Structure 4V7U

Bacterial Ribosome

Erythromycin



2

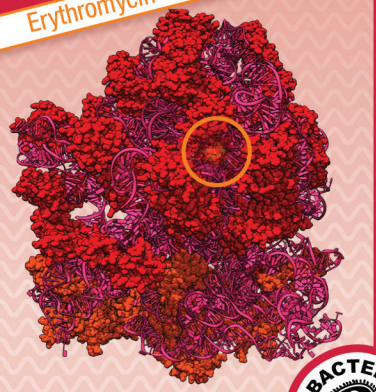
BACTERIA

BACTERIA

PDB Structure 4V7U

Bacterial Ribosome

Erythromycin



1

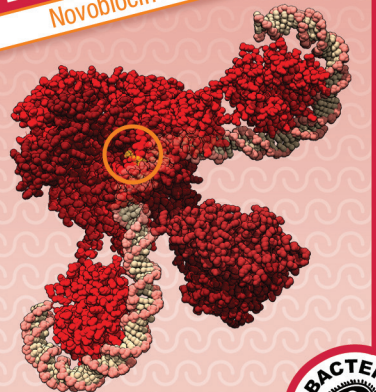
BACTERIA

BACTERIA

PDB Structure 6RKW

DNA Gyrase

Novobiocin



2

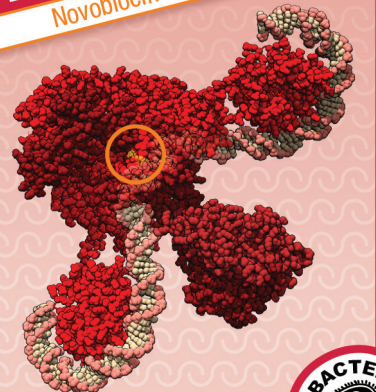
BACTERIA

BACTERIA

PDB Structure 6RKW

DNA Gyrase

Novobiocin



1

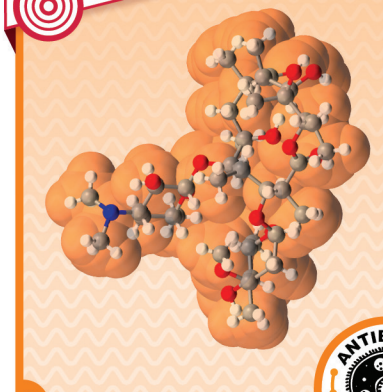
BACTERIA

ANTIBIOTIC

CSD Refcode QIFKEX

Erythromycin

Bacterial Ribosome



2

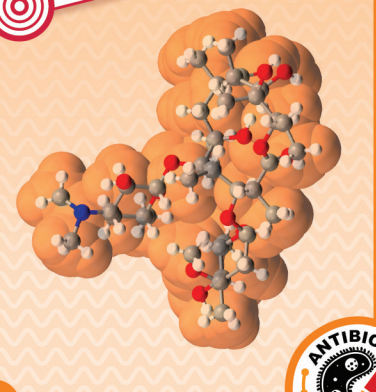
ANTIBIOTIC

ANTIBIOTIC

CSD Refcode QIFKEX

Erythromycin

Bacterial Ribosome



1

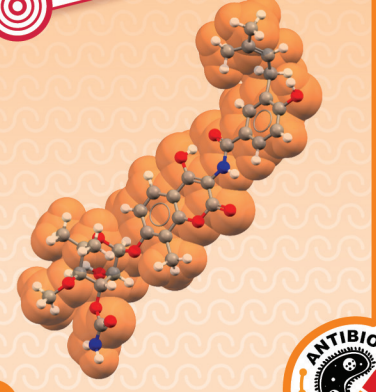
ANTIBIOTIC

ANTIBIOTIC

CSD Refcode NIVBIO

Novobiocin

DNA Gyrase



2

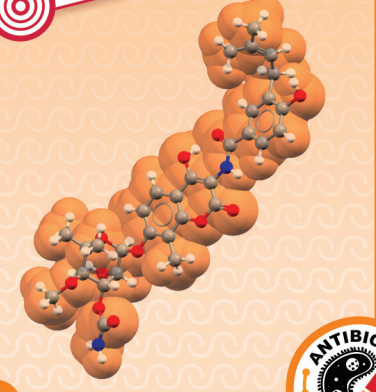
ANTIBIOTIC

ANTIBIOTIC

CSD Refcode NIVBIO

Novobiocin

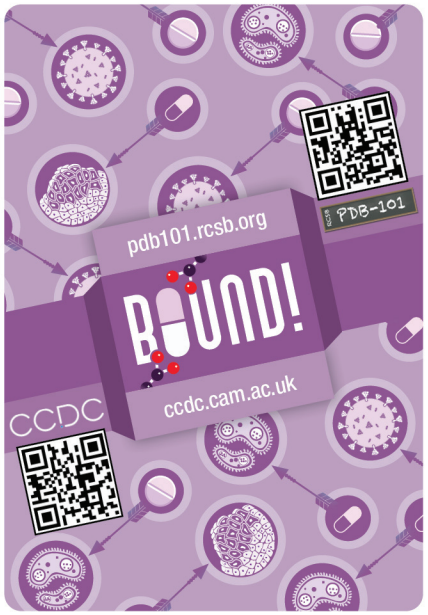
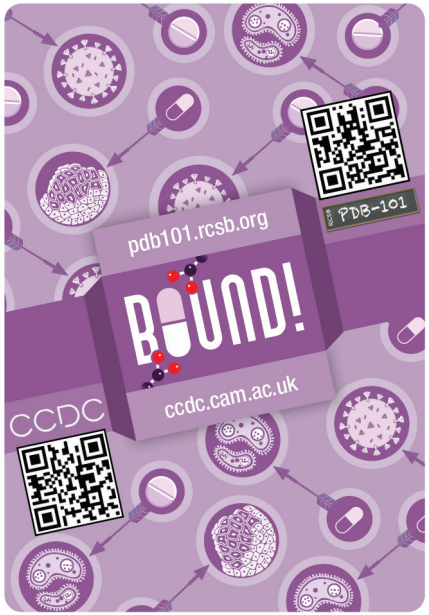
DNA Gyrase



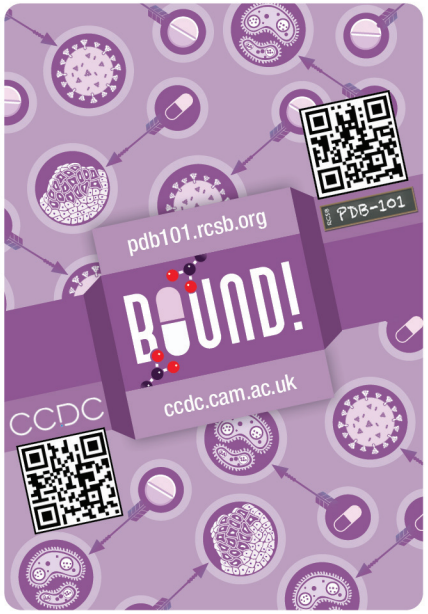
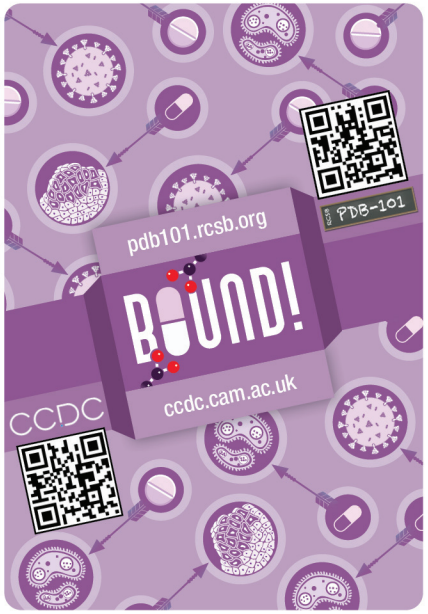
1

ANTIBIOTIC


pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

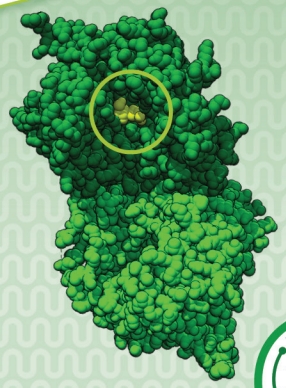
pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

VIRUS

PDB Structure 3SFU

RNA-dependent RNA Polymerase

Ribavirin



2

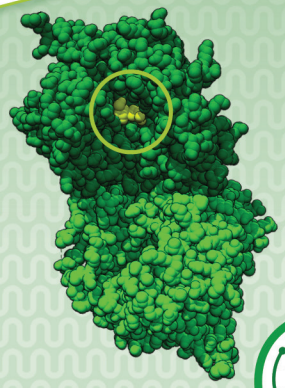
VIRUS

VIRUS

PDB Structure 3SFU

RNA-dependent RNA Polymerase

Ribavirin



1

VIRUS

VIRUS

PDB Structure 6L0C

HIV Integrase

Raltegravir



2

VIRUS

VIRUS

PDB Structure 6L0C

HIV Integrase

Raltegravir



1

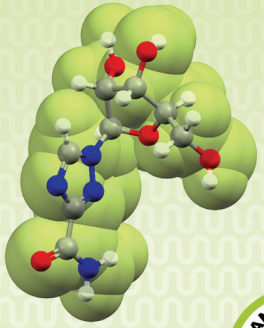
VIRUS

ANTIVIRAL

CSD Refcode VIRAZL01

Ribavirin

RNA-dependent RNA Polymerase



2

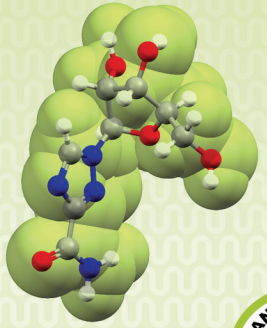
ANTIVIRAL

ANTIVIRAL

CSD Refcode VIRAZL01

Ribavirin

RNA-dependent RNA Polymerase



1

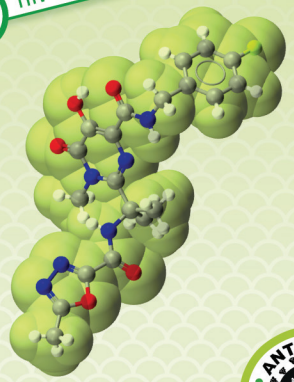
ANTIVIRAL

ANTIVIRAL

CSD Refcode DIRCIS

Raltegravir

HIV Integrase



2

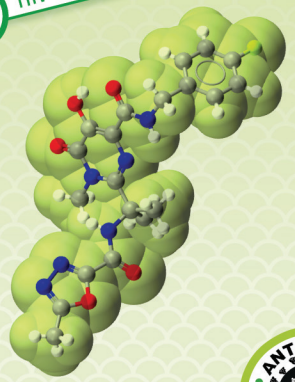
ANTIVIRAL

ANTIVIRAL

CSD Refcode DIRCIS

Raltegravir

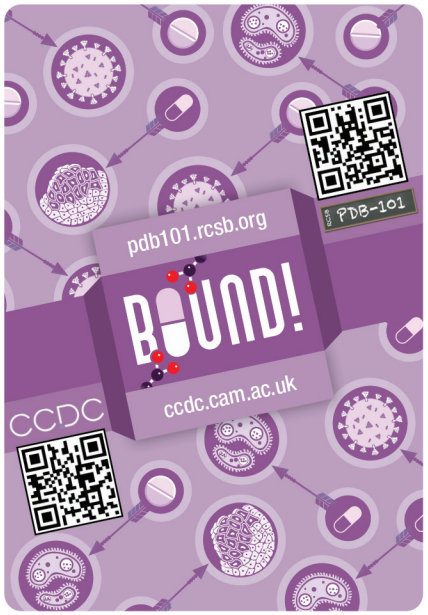
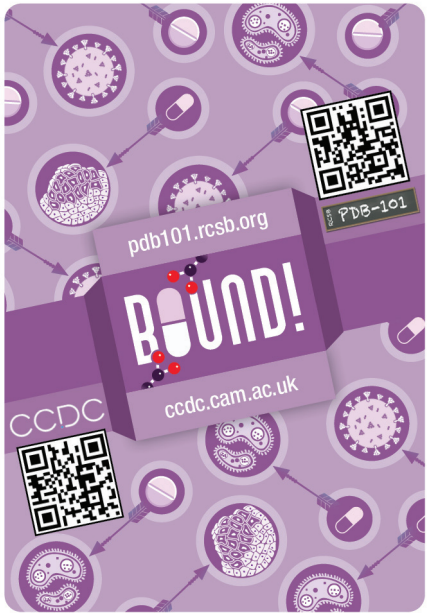
HIV Integrase



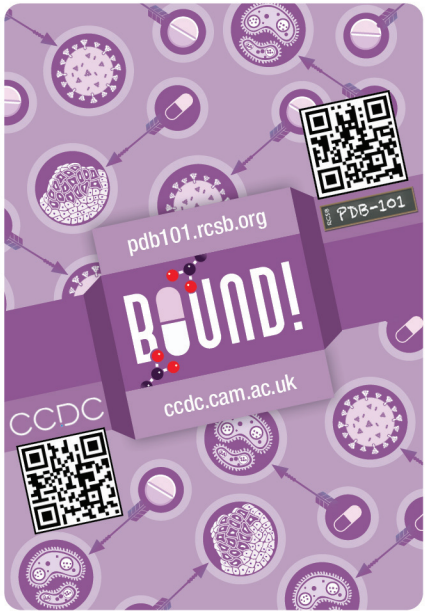
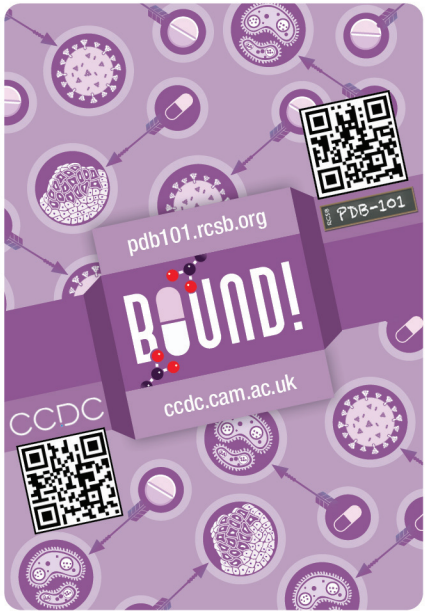
1

ANTIVIRAL


pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

VIRUS

PDB Structure 7KJX

HIV Reverse Transcriptase

Nevirapine



2

VIRUS

VIRUS

PDB Structure 7KJX

HIV Reverse Transcriptase

Nevirapine



1

VIRUS

VIRUS

PDB Structure 7LUF

Herpesvirus DNA Polymerase

Acyclovir



2

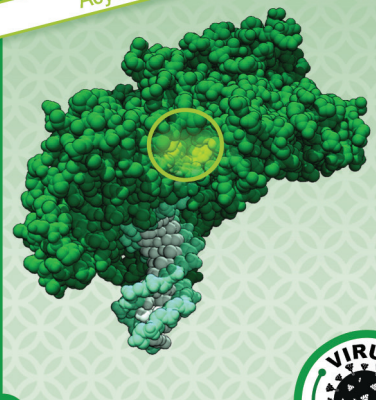
VIRUS

VIRUS

PDB Structure 7LUF

Herpesvirus DNA Polymerase

Acyclovir



1

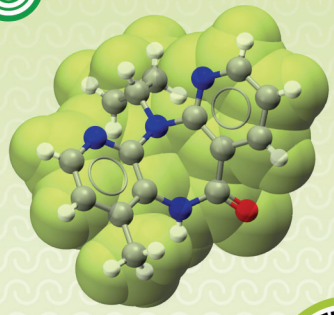
VIRUS

ANTIVIRAL

CSD Refcode PABHIJ01

Nevirapine

HIV Reverse Transcriptase



2

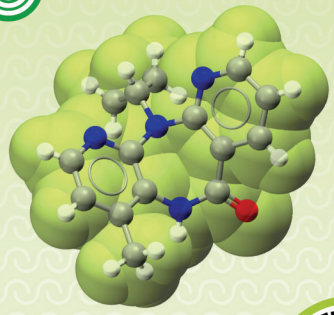
ANTIVIRAL

ANTIVIRAL

CSD Refcode PABHIJ01

Nevirapine

HIV Reverse Transcriptase



1

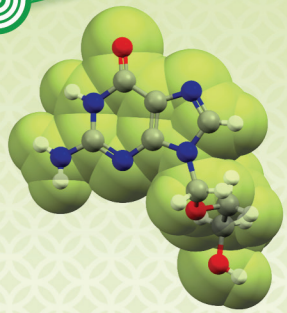
ANTIVIRAL

ANTIVIRAL

CSD Refcode RIGDES

Acyclovir

Herpesvirus DNA Polymerase



2

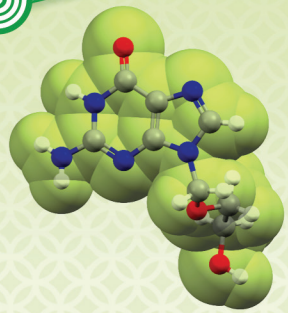
ANTIVIRAL

ANTIVIRAL

CSD Refcode RIGDES

Acyclovir

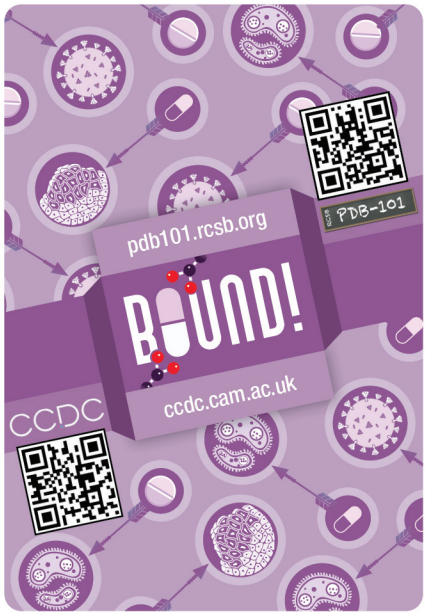
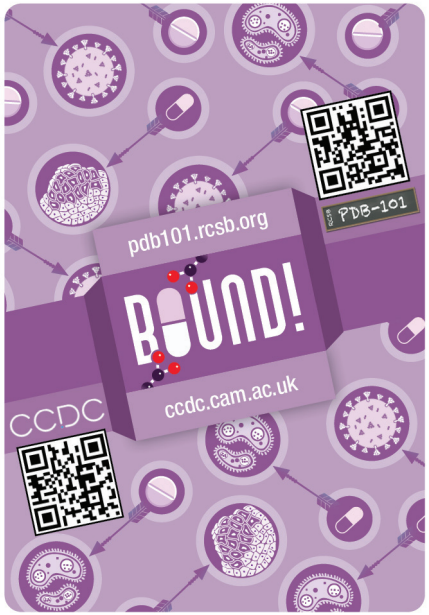
Herpesvirus DNA Polymerase



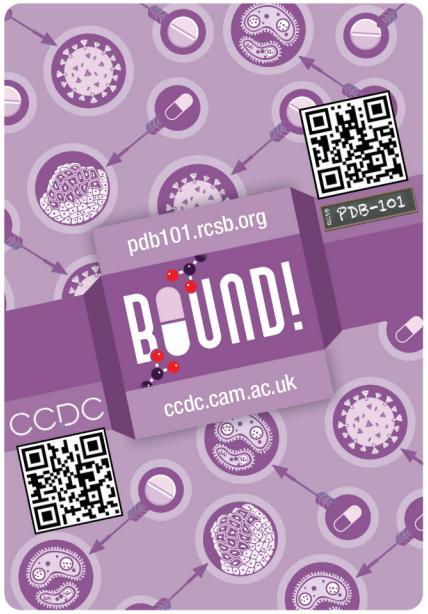
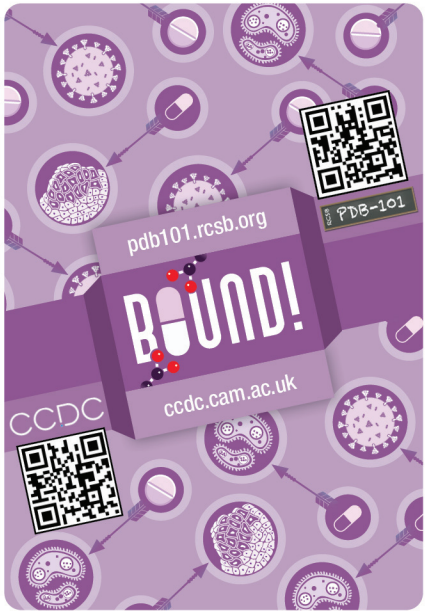
1

ANTIVIRAL


pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

3

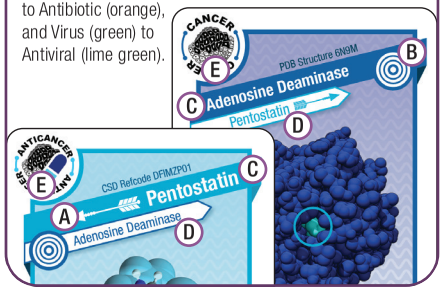
6. If a player receiving the request has *more than one card* of the requested TYPE or NAME, they may choose which of those cards to give to the requesting player.
7. If two players have cards with the requested NAME, the requesting player decides which of those two players will give them their card.
8. A player receiving a requested card must then immediately reveal a pair that matches in one of two ways:
   - *A Drug and its specific Target.* This pair remains on the table in front of the player and will be worth one (1) point at the end of the game.
     Example: Ribosome + Erythromycin.
   - *Two cards of the same TYPE.* These cards should be placed in the discard pile and do not score points.
     Example: Erythromycin (Antibiotic) + Novobiocin (Antibiotic).
9. The card that was requested does not have to be part of the matched pair that the player reveals.
10. If the player does not receive the requested card, they must draw a card from the draw pile. They may then either lay down a matched Drug-Target pair, discard a pair of cards of the same Type, or pass.

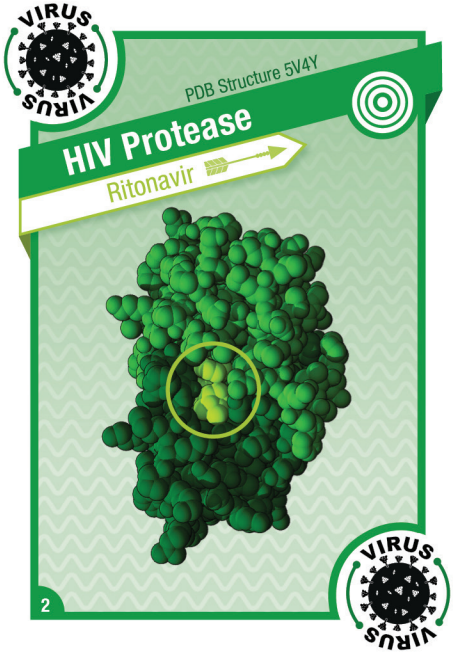
1

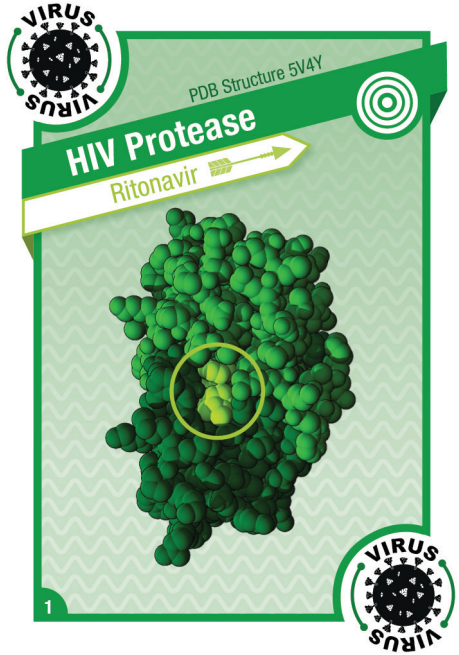
In this game players compete to match the most drugs to protein targets

The deck features 15 pairs of matching drugs (A) and protein targets (B), each represented twice for 60 cards total. Each card has a **NAME** and a **TYPE**.

The **NAME** is listed on the top in the colored stripe (C). The NAME of the matching card is listed underneath on the white stripe (D). The **TYPE** (E) is identified by both a distinct color and a unique icon in the upper left corner of the card. There are six different card TYPES that encompass three varieties of target-drug pairing: Cancer (navy) to Anticancer (cyan), Bacteria (red) to Antibiotic (orange), and Virus (green) to Antiviral (lime green).







4

Progressing and ending the game

11. The turn then ends and the player to the left takes their turn.
12. If the draw pile is emptied, the discard pile is shuffled and becomes the new draw pile.
13. The game ends when one player has no cards remaining in their hand.

Counting the results

14. When the game has ended, players score:
    - **One (1) point** for each matched Drug-Target pair they revealed during the game (see 8).
    - Cards remaining in players' hands do not score.
    - Cards discarded as matched TYPE pairs do not score (see 8).
    - The player who ended the game by emptying their hand scores an additional **three (3) points**.
    - The winners are the players with the highest point total. Ties are permitted.

For more information scan either of the QR codes on the back of the cards.

2

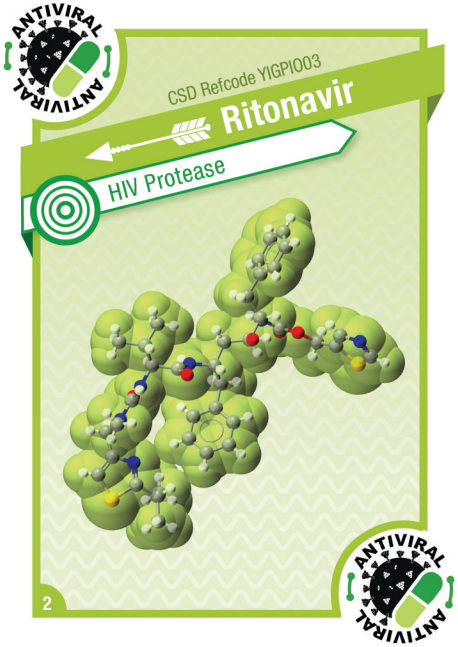
Bound! Instructions

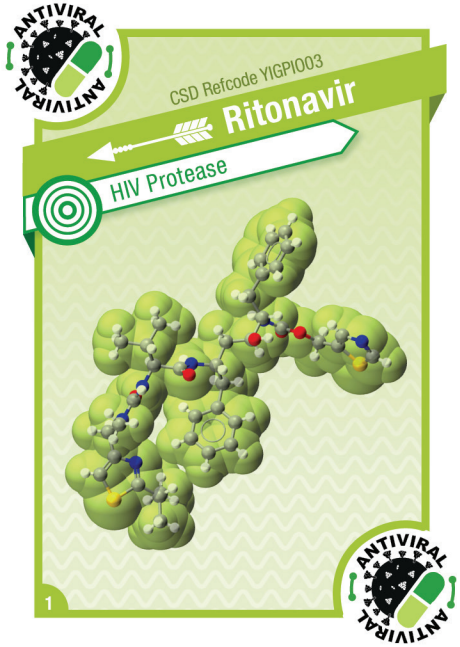
Getting started

1. Shuffle the deck and deal each player **seven** cards. Players may look at their own cards, but should keep them secret from other players except when instructed by the rules.
2. Place the undealt cards face-down in a pile in the center of the play area. This is the **draw pile**. Any cards that are discarded should be placed face up in a pile next to the draw pile. This is the **discard pile**.
3. Choose a player to take the first turn. After a player has taken their turn, the player to their left may take the next turn.

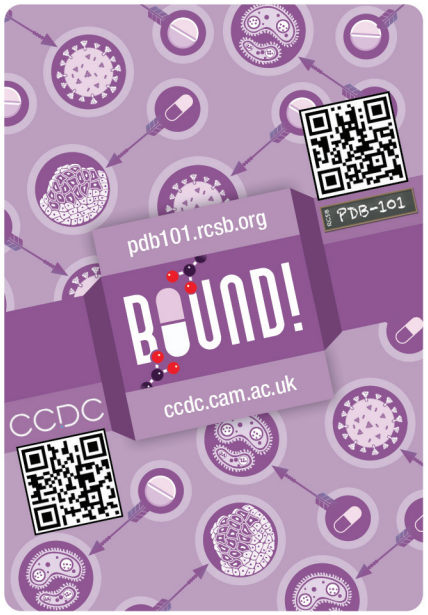
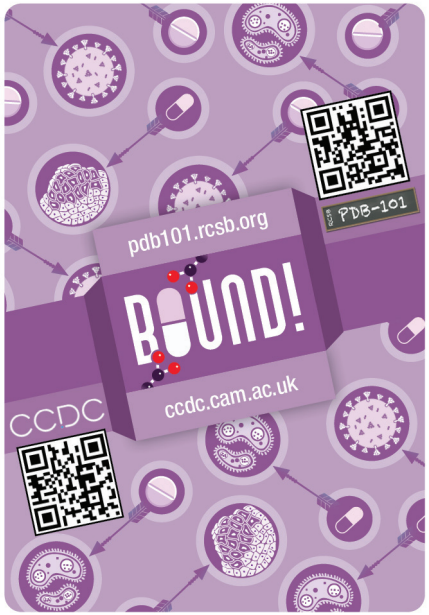
On a player's turn

4. The player must request a card from another player. They may do it in only one of two ways:
   - Request a card of a particular **TYPE** from a specific player (e.g. *John, do you have a Cancer card?*), or
   - Request a specific card by **NAME** from all players (e.g. *I need the Estrogen Receptor Beta card.*)
5. If the player or players receiving a request have the requested card in their hand, they must give it to the requesting player.

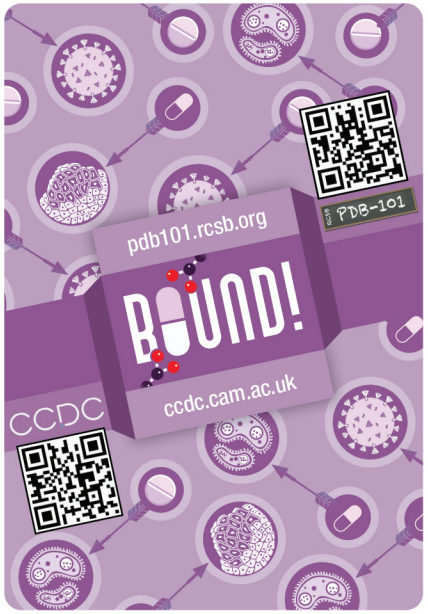
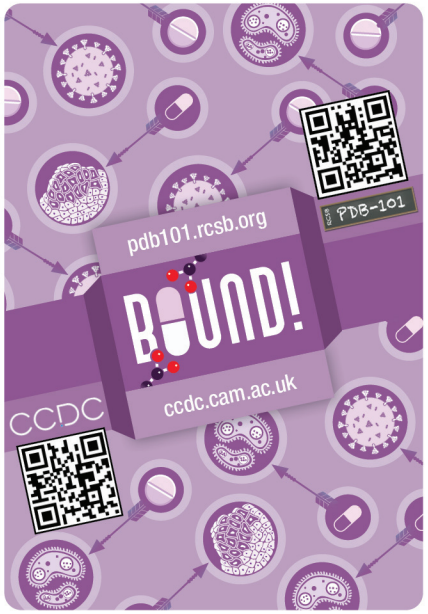





pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101

pdb101.rcsb.org
BOUND!
ccdc.cam.ac.uk
CCDC
PDB-101