

# Working with the BioradConfig Package

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## Purpose

BioradConfig facilitates the creation of Bio-Rad Bio-Plex 200 plate configurations. The package will provide the middleware for the Jovinge Lab's plate configuration application – interacting with the SQLite data base storing relevant information and updating appropriately.

## Data Back-End

The SQLite database on the back end was created with the following schema:

```
dbGetQuery(  
  db,  
  'CREATE TABLE plate  
  ( "id" INTEGER PRIMARY KEY,  
    "creation_date" TEXT,  
    "run_date" TEXT,  
    "is_processed" INTEGER,  
    "layout" TEXT  
  );'  
)
```

```
dbGetQuery(  
  db,  
  'CREATE TABLE patient  
  ( "id" INTEGER PRIMARY KEY,  
    "redcap_id" INTEGER,  
    "project_id" INTEGER,  
    "is_complete_0" INTEGER,  
    "is_complete_48" INTEGER,  
    "is_complete_192" INTEGER,  
    "all_complete" INTEGER  
  );'  
)
```

```
dbGetQuery(  
  db,  
  'CREATE TABLE aliquot  
  ( "id" INTEGER PRIMARY KEY,  
    "plate_id" INTEGER,  
    "plate_row" TEXT,  
    "plate_col" INTEGER,  
    "patient_id" INTEGER,  
    "barcode" TEXT,  
    "redcap_id" INTEGER,  
    "is_depleted" INTEGER,
```

```
"box_number" TEXT,  
"box_row" TEXT,  
"box_col" INTEGER,  
"timepoint" TEXT,  
FOREIGN KEY(plate_id) REFERENCES plate(id),  
FOREIGN KEY(patient_id) REFERENCES patient(id)  
);'  
)
```

## **BioradConfig Classes**

Each table in the database has a corresponding **BioradConfig** class.