25/5 overnight liquid culture TOP 10

26/5 Made E. coli Top10 competent cells

6/6 Made E. coli C600 (P1 lysogen) competent cells

**7/6** Amplified phagemid/phagemid-pCAS by transformation

12/6 Digestion check of the J72114-J72100 plasmid

13/6 Maxi-prep of the J72114-J72100 plasmid

14/6 Digestion check for J72114-J72100-pCas9

15/6 Maxi-prep J72114-J72100-pCas9

**16/6** Resuspention of gBlocks Cpf1(p1) fragment; Digestion of phagemid by AvRII&BsiWI; Digestion of Cpf1(P1) by AvRII&BsiWI;

**19/6** Gel extraction of Cpf1(p1)-digested and Phagemid-digested; Ligation of phagemid-digested (AvRII&BsiWI) and Cpf1(P1)-digested (AvRII&BsiWI)

**20/6** Transformation of the product of ligation phagemid-digested (AvRII&BsiWI) and Cpf1(P1)-digested (AvRII&BsiWI)

21/6 Cpf1(p1) work: Blue-white screening& colony picking and liquid culture

21/6 Digestion of Cpf1(P2) by HindIII&AvRII

22/6 Glycerol stock of bacteria pellet and resuspend VanA/KPC spacer AND primers

26/6 Resuspention of gBlocks VanA/KPC spacer1 fragment

27/6 PCR for spacer1-CPF1 with primer FOR-universal&REV-Bsal

**29/6** Gel extraction: Kpc-spacer1 & VanA spacer1 PCR product; Digestion of Kpc-spacer1 & VanA spacer1 by Bsal

**3/7** Mini-prep: phagemid-Cpf1-p1, phagemid-saCas-p1; Digestion check mini-prep product; Digestion of phagemid-Cpf1-p1 by HindIII and AvRII; Gel running of digestion product.

**4/7** Gel extraction of phagemid-Cpf1-p1-digest; Ligation of phagemid-cpf1-p1&cpf1-p2; Transformation&plate

**5/7** Liquid culture for colony of phagemid-Cpf1(p1-p2)

**6/7** Glycerol stock for liquid culture; Mini-prep of phagemid-cpf1-p1-p2; Digestion check of phagemid cpf1(p1-p2); Digestion of phagemid-cpf1-p1-p2 by Bsal.

7/7 Gel extraction of phagemid-cpf1-p1-p2

**10/7** Ligation of phagemid-cpf1&kpc-spacer1 and phagemid-cpf1&VanA-spacer1; Transformation & plate with ligation product at room temperature

**11/7** Transformation & plate with ligation product at 4°C; Ligation of phagemid-cpf1&kpc-spacer1 and phagemid-cpf1&VanA-spacer1 again; Liquid culture of colony on 10/7

**12/7** Miniprep (\*8) of phagemid-cpf1 and phagemid-cpf1-kpc/vanA; Digestion check of phagemid-cpf1 and phagemid-cpf1-kpc/vanA by AvRII&HindIII and BsiwI separately (DID NOT WORK); Gel running and liquid culture of colony on 11/7

13/7 Colony PCR check for phagemid-cpf1-kpc/vanA by primer FOR-cpf1-8&REV-aCas

14/7 Gel running of PCR product on 12/7 (DID NOT WORK)

15/7 Phagemid PCR check of phagemid-cpf1-kpc/vanA by another PCR program

**18/7:** Gel running of PCR product on 15/7 (DID NOT WORK); Digestion check plasmid Phagemid-cpf1-kpc/vanA by Bsiwl&Bsal (SUCCESSFULLY)

**19/7:** Transformation & plate of Final construct phagemid-Cpf1-Kpc/VanA to competent cell C600

**20/7** Mini-prep of phagemid-CPF1, Phagemid-Cpf1-VanA and Phagemid-Cpf1-KPC; liquid culture of C600 colony.

**21/7** Produce phage with phagemid-Cpf1-VanA/KPC; liquid culture of phage with Moclo-VanA/KPC and phage without spacer with Moclo-VanA/KPC; First round plate on LB, Chl, Kan

**24/7** Transformation & plate of Final construct phagemid-Cpf1-Kpc/VanA to competent cell C600

**25/7** Second round plate on LB, Chl, Kan and colonies were picked from first round plate which aims to show the CRISPR work or not; produce phage again from 24/7 C600 cells. **26/7** Observation of second round plate result, CRISRP DID WORK ON TWO COLONIES; First round plate again.

**27/7** Re-plated ones which CRISPR worked for double check