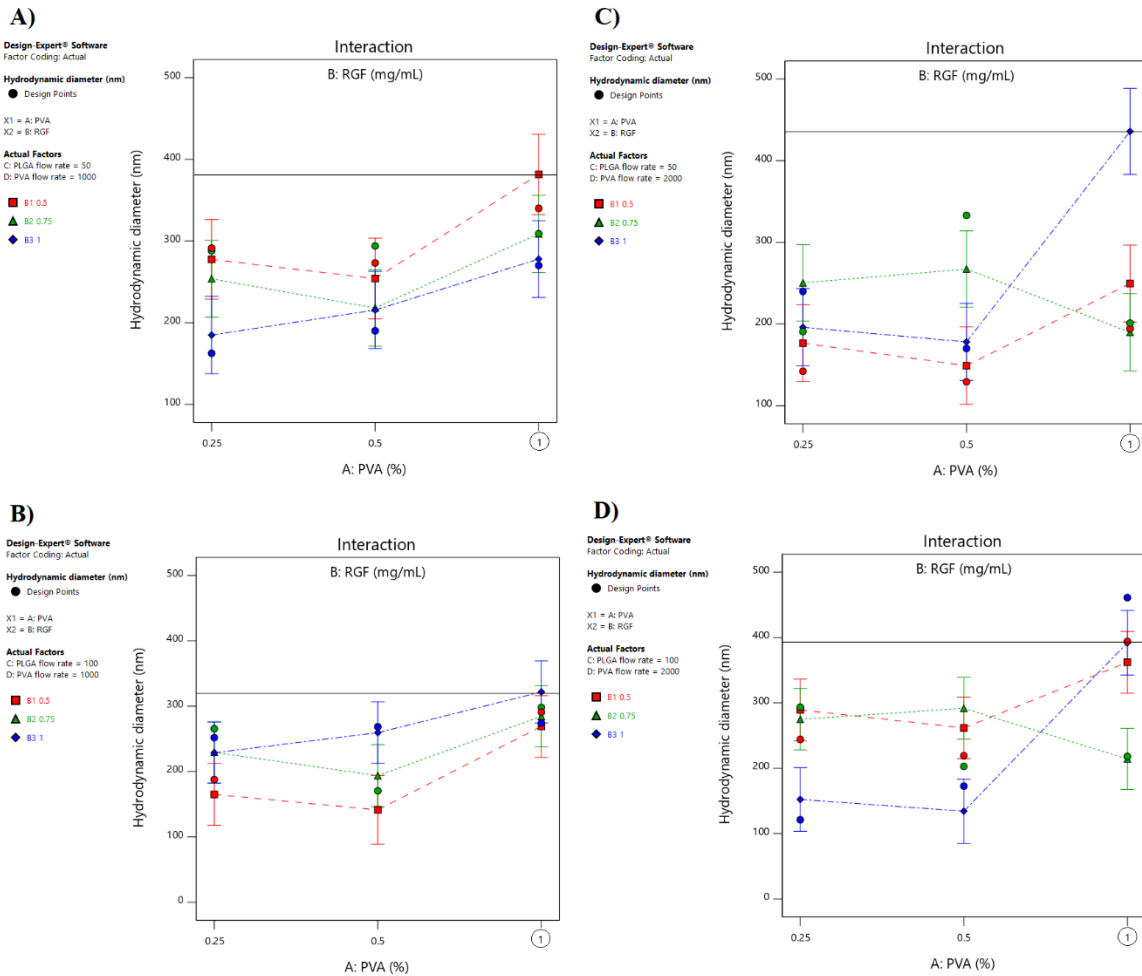


Chemo-radiotherapy with ^{177}Lu -PLGA(RGF)-CXCR4L for the targeted treatment of colorectal cancer

Pedro Cruz-Nova¹, Brenda Gibbens-Bandala^{1*}, Alejandra Ancira-Cortez¹, Gerardo Ramírez-Nava², Clara Santos-Cuevas¹, Myrna Luna-Gutiérrez¹, Blanca Ocampo-García^{1*}.

Supplementary Material



S1: Effect of PVA and RGF concentration and PLGA, PVA flow rate on the hydrodynamic diameter of PLGA(RGF) nanoparticles

A)

Design-Expert® Software

Factor Coding: Actual

Zeta potential (mV)

● Design Points

X1 = A: PVA

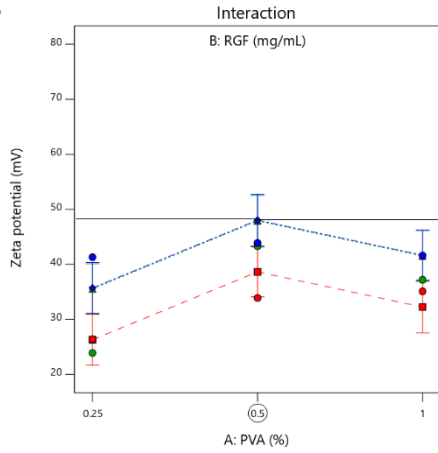
X2 = B: RGF

Actual Factors

C: PLGA flow rate = 50

D: PVA flow rate = 1000

■ B1 0.5
▲ B2 0.75
◆ B3 1



C)

Design-Expert® Software

Factor Coding: Actual

Zeta potential (mV)

● Design Points

X1 = A: PVA

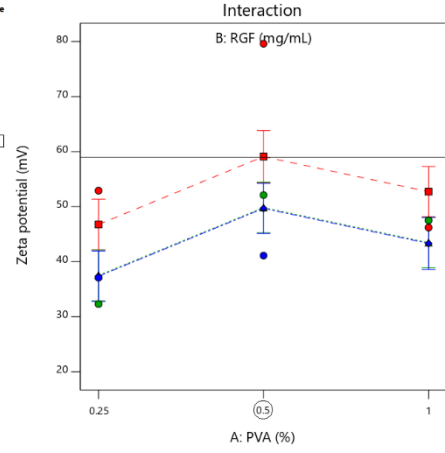
X2 = B: RGF

Actual Factors

C: PLGA flow rate = 50

D: PVA flow rate = 2000

■ B1 0.5
▲ B2 0.75
◆ B3 1



B)

Design-Expert® Software

Factor Coding: Actual

Zeta potential (mV)

● Design Points

X1 = A: PVA

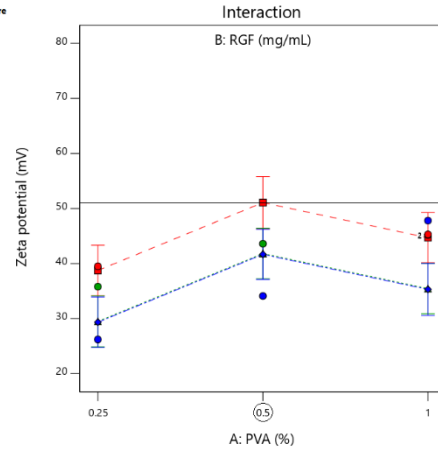
X2 = B: RGF

Actual Factors

C: PLGA flow rate = 100

D: PVA flow rate = 1000

■ B1 0.5
▲ B2 0.75
◆ B3 1



D)

Design-Expert® Software

Factor Coding: Actual

Zeta potential (mV)

● Design Points

X1 = A: PVA

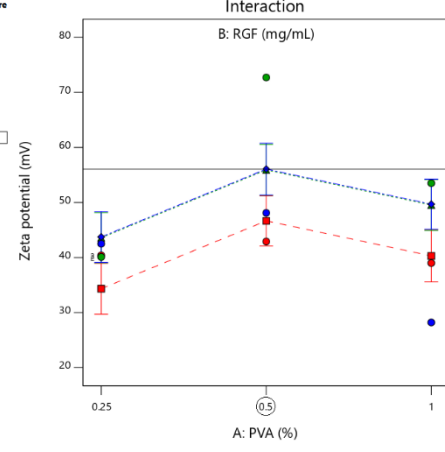
X2 = B: RGF

Actual Factors

C: PLGA flow rate = 100

D: PVA flow rate = 2000

■ B1 0.5
▲ B2 0.75
◆ B3 1

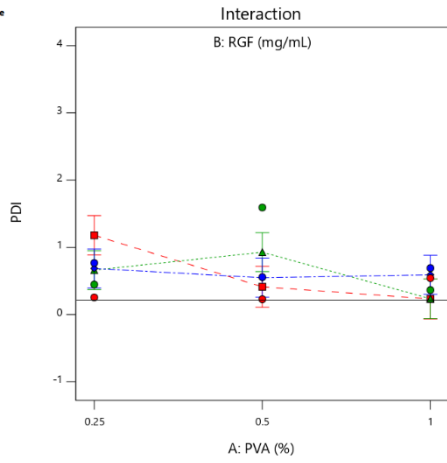


S2: Effect of PVA and RGF concentration and PLGA, PVA flow rate on the ζ potential of PLGA(RGF) nanoparticles

A)
Design-Expert® Software
Factor Coding: Actual

PDI
● Design Points
X1 = A: PVA
X2 = B: RGF
Actual Factors
C: PLGA flow rate = 50
D: PVA flow rate = 1000

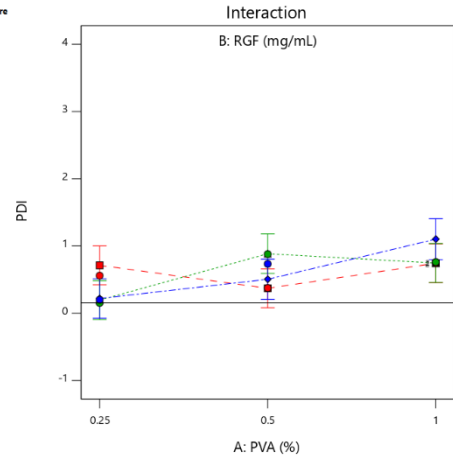
■ B1 0.5
▲ B2 0.75
◆ B3 1



C)
Design-Expert® Software
Factor Coding: Actual

PDI
● Design Points
X1 = A: PVA
X2 = B: RGF
Actual Factors
C: PLGA flow rate = 50
D: PVA flow rate = 2000

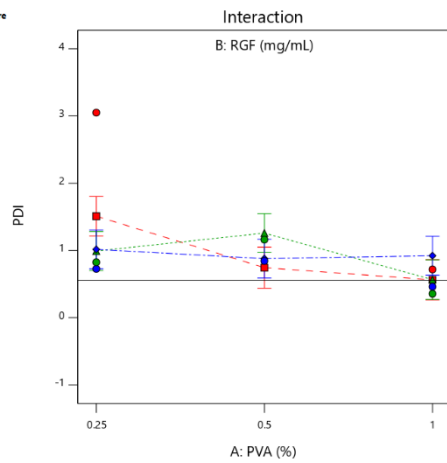
■ B1 0.5
▲ B2 0.75
◆ B3 1



B)
Design-Expert® Software
Factor Coding: Actual

PDI
● Design Points
X1 = A: PVA
X2 = B: RGF
Actual Factors
C: PLGA flow rate = 100
D: PVA flow rate = 1000

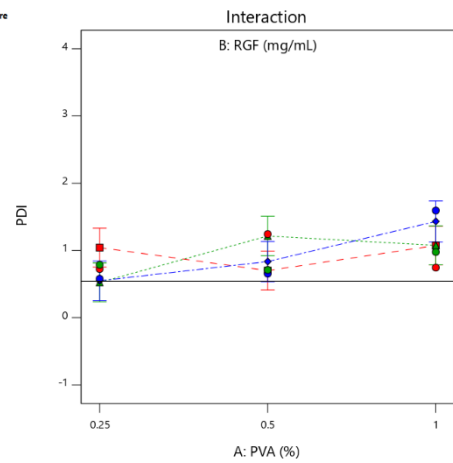
■ B1 0.5
▲ B2 0.75
◆ B3 1



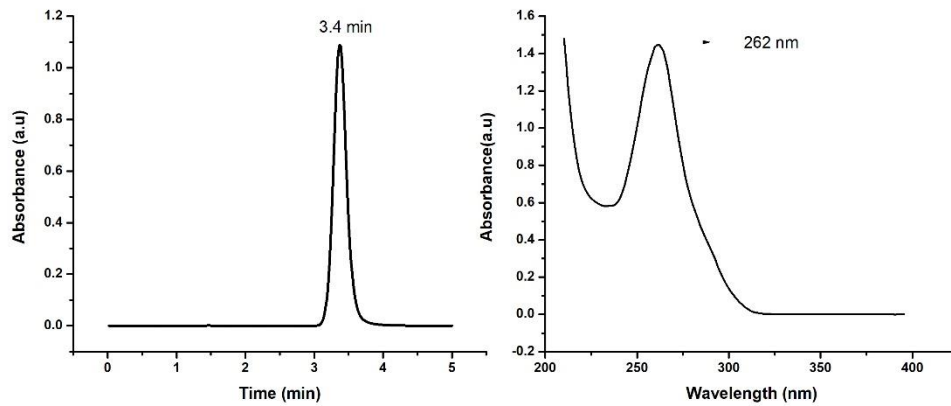
D)
Design-Expert® Software
Factor Coding: Actual

PDI
● Design Points
X1 = A: PVA
X2 = B: RGF
Actual Factors
C: PLGA flow rate = 100
D: PVA flow rate = 2000

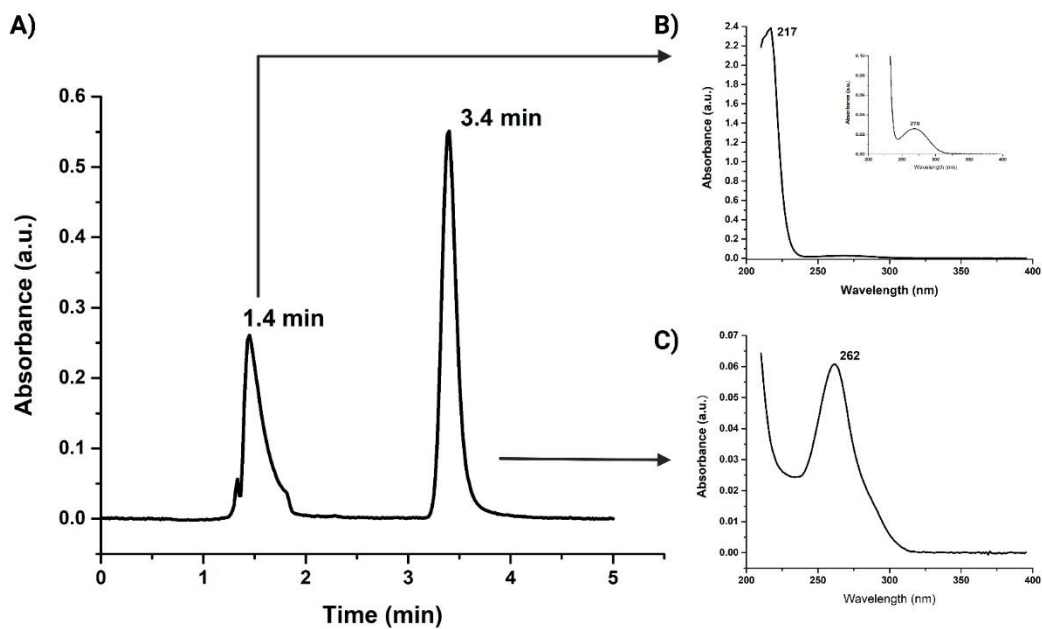
■ B1 0.5
▲ B2 0.75
◆ B3 1



S3: Effect of PVA and RGF concentration and PLGA, PVA flow rate on the PDI of PLGA(RGF) nanoparticles



S4: Regorafenib chromatogram and the UV-Vis associated spectrum



S5: A) Chromatogram of the recovered RGF from PLGA(RGF) nanoparticles. The peak at 1.4 nm corresponds to the UV-Vis spectrum of PLGA fragments (B) and the peak at 3.4 nm corresponds to recovered regorafenib (C). Dilution factor was not applied in B) and C)