```python
import numpy as np
from scipy.integrate import odeint
from scipy.optimize import curve_fit
from scipy.optimize import differential_evolution
import matplotlib.pyplot as plt
from matplotlib.backends.backend_pdf import PdfPages
import pandas as pd

t = np.linspace(0,34800, num=6961)
rawdata =
np.transpose(np.delete(np.genfromtxt('hpa2long_ononly.csv',delimiter=','),0,0))
newdata = list(rawdata.flatten())
#new = newdata[0:24480:240]
lightdata = np.transpose(np.delete(np.genfromtxt('longlight_ononly.csv',
delimiter=','),0,0))

def sqres(ptuple):
    return np.sum((np.asarray(newdata)-func(t,*ptuple))**2)

#def func(t,d1,k1,Kd,n,d2,k2,k3):
def func(t,d2,k2,k3):
    inivalues = [1,0,0,0,0,0,0]
    arrayvalues = np.asarray([])

    for i in range(len(lightdata[:,0])):
        def I(t):
            tindex = t/5
            if tindex > 6960:
                tindex = 6960
            return lightdata[i][int(tindex)]

        #def odes(z,t,d1,k1,Kd,n,d2,k2,k3):
        def odes(z,t,d1,k1,k3):
            Pu,Pb,Pa,mRNA,mCherry1,mCherry2,mCherry3 = z
            d1 = 0.019905
            k1 = 0.08299
            Kd = 90.41
            n = 0.964487
            #d2= 486.67
            #k2= 6.597
            #k3= 0.0539


            d3 = 0.000077
            k4 = 1.25
```