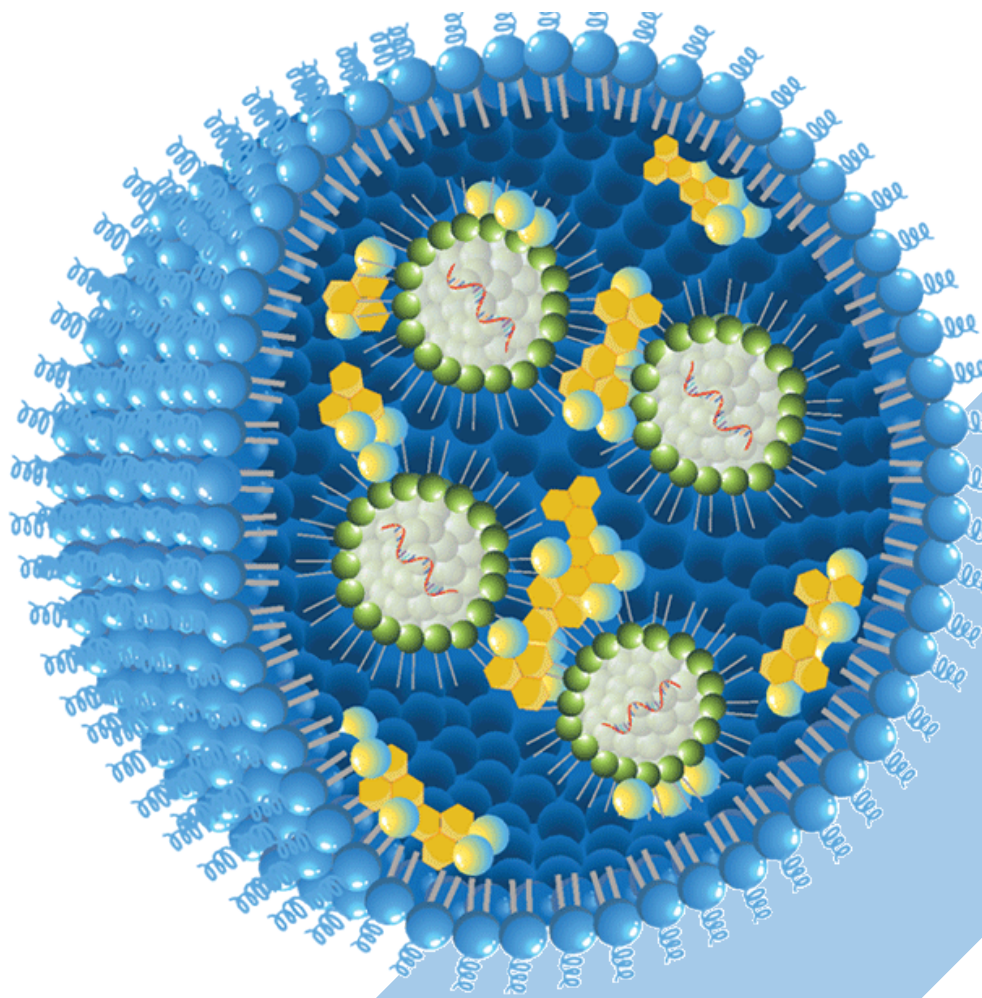


# Custom NanOZ-LNP™ Service

**CUSTOMIZED WORKFLOW TAILORED FOR YOUR  
SPECIFIC APPLICATION / NEEDS**



## LNP Design



### Lipids

#### Complexing lipid (Ionizable)



Nucleic acid complexation  
Membrane fusion & endosomal escape  
**OZ Biosciences proprietary lipids**



#### Helper lipid

Stability and structure



#### PEG-lipid

Stealth and increase bio-circulation



#### Cholesterol

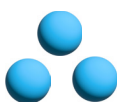
Rigidity and integrity  
Help the endosomal release

### Cargo



#### Nucleic acid

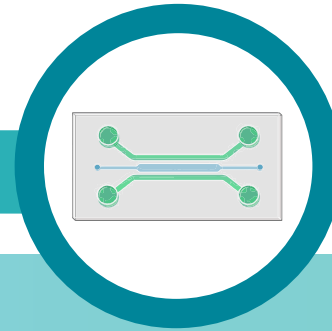
DNA, ODN,  
RNA (siRNA, mRNA, saRNA,  
shRNA, miRNA...),



#### Small molecules

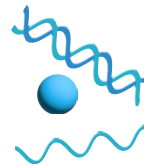
API  
peptide  
protein ...

## LNP manufacturing

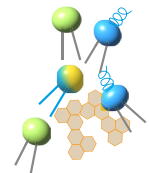


### Solutions preparation

#### Cargo in buffer

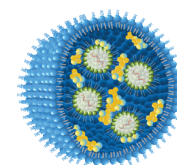


#### Lipids in ethanol



### Microfluidic Mixing

N/P ratio



Loaded LNP

### Size Checking

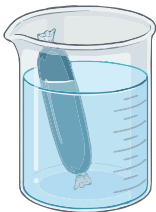
# Design Platform

## Downstream Process



### Purification and Formulation

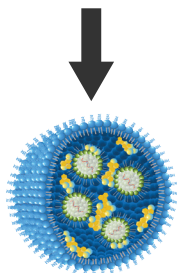
#### Dialysis and TFF



Removal of alcohol solvent and free molecules, addition of **cryoprotectant**, **formulation at desired concentration**

#### Sterilization

0.2  $\mu\text{m}$  filter



**Stabilized LNP in neutral pH**

\* LNP can be optionally **functionalized** with targeting ligands such as peptides, antibodies...

## Quality Control

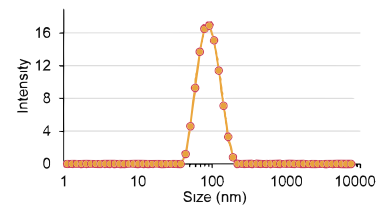


### Characterization studies

#### Dynamic Light Scattering

Hydrodynamic size, polydispersity index (PdI) and zeta potential

mRNA-LNP NanOZ (0.1mg/mL RNA)

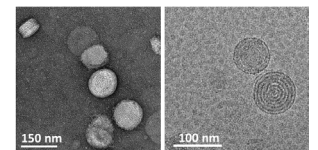
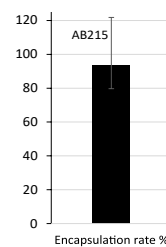


#### Encapsulation

DNA- or RNA-quantification kit assay

#### On request

CryoTEM, negative stain EM, HPLC, LC-MS



#### Sterility studies

Thioglycolate and Caso-bouillon

#### Stability studies

RT ; 4  $^{\circ}\text{C}$  ; -20 $^{\circ}\text{C}$  ; -80 $^{\circ}\text{C}$

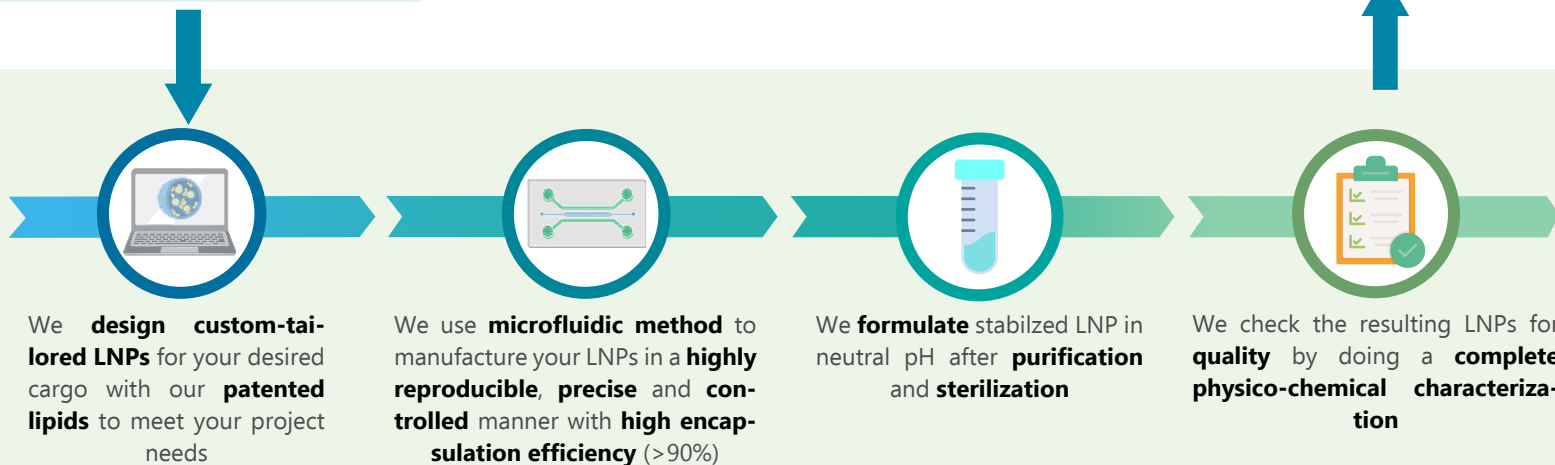
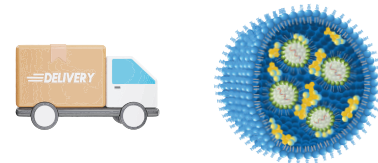
weeks

## CUSTOMER

Tell us about **your project**.  
You can send us your **molecule of interest** OR we can **produce a custom RNA** for you

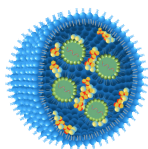


We ship your **fully custom-made LNPs**

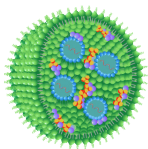


## OZ BIOSCIENCES EXPERTISE

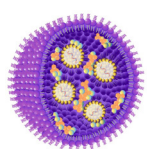
### READY-TO-USE NanOZ-LNP/mRNA



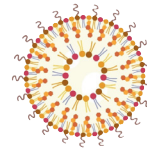
NanOZ LNP mRNA(GFP)



NanOZ LNP mRNA(Luc)



NanOZ LNP mRNA(OVA)



NanOZ empty-LNP

### NanOZ LNP-DIY : Lipid mix for LNP formulation

- NanOZ LNP-DIY(FP105)
- NanOZ LNP-DIY(FP116)
- NanOZ LNP-DIY(SS1)
- NanOZ LNP-DIY(SM102)



**Complexing lipid**  
Nucleic acid interaction  
Membrane fusion/endosomal escape



**Cholesterol**  
Rigidity and integrity  
Help the endosomal release



**Helper lipid**  
Stability and structure



**PEG-lipid**  
Stealth and increase bio-circulation

### USA & CANADA

OZ Biosciences USA Inc.  
4901 Morena Boulevard  
Suite 901  
San Diego, CA 92117  
USA  
Ph: +1 858 246 7840  
Fax: +1 855 631 0626  
orderusa@ozbiosciences.com



**OZ BIOSCIENCES**  
The art of delivery systems

### FRANCE & EUROPE

OZ Biosciences SAS  
Parc Scientifique de Luminy  
zone entreprise, case 922  
13288 Marseille Cedex 09  
FRANCE  
Ph: +33 486 94 85 16  
Fax: +33 486 94 85 15  
order@ozbiosciences.com