## Roche Pharma Day 2020

# *Late Stage Immunology, Ophthalmology and Infectious Disease*

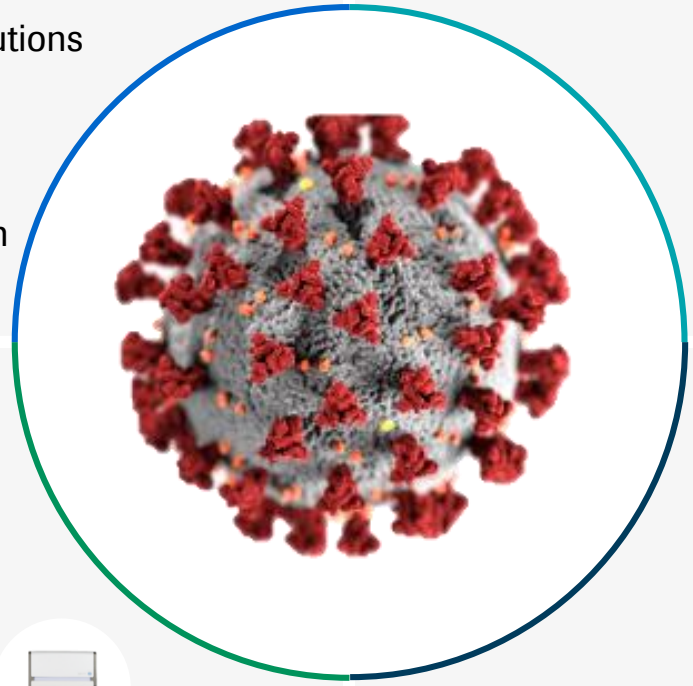
**Cristin Hubbard** | Senior Vice President Immunology, Infectious Disease & Ophthalmology, Global Product Strategy

# Roche's response to the pandemic

*Commitment every step of the way*

## Diagnostics

- Research & development for best-in-class solutions
- Deliver high quality diagnostics with flexible throughput
- Strong local support and partnership
- Holistic disease and patient-oriented approach



- SARS-CoV-2 PCR, Ab & rapid antigen test
- SARS-CoV-2/Influenza A/B differentiation test
- Other routine and diagnostic tests

## Pharma

- Innovative therapies with various MOAs
- World-leading biologics manufacturing capacity
- Strong partnerships with healthcare ecosystems across the globe

- Xofluza
- Actemra
- REGN-COV2 nAB cocktail

# Late stage pipeline update

1. **Hematology franchise**
   - DLBCL: Polivy, glofitamab, mosunetuzumab
   - FL: mosunetuzumab, glofitamab, Polivy
   - AML: Venclexta
   - MM: Venclexta
   - MDS: Venclexta

2. **Breast Cancer franchise**
   - TNBC: Tecentriq, ipatasertib
   - HR+: SERD (RG6171), PI3Kαi (RG6114)
   - HER2+: Tecentriq

3. **Lung Cancer franchise**
   - NSCLC: Tecentriq, tiragolumab
   - SCLC: Tecentriq, tiragolumab
   - ALK+: Alecensa
   - ROS1+/NTRK+: Rozlytrek
   - RET+: Gavreto
   - KRAS *G12C*+: GDC-6063

4. **Other oncology**
   - CRPC: ipatasertib
   - Thyroid cancer: Gavreto
   - Esophageal cancer: tiragolumab
   - Melanoma: Tecentriq, Cotellic, Zelboraf

5. **Non-malignant hematology**
   - Hemophilia A: Hemlibra
   - Hemophilia A: Factor VIII Gene Therapy
   - PNH: crovalimab

6. **Neuroscience**
   - MS: Ocrevus; fenebrutinib
   - SMA: Evrysdi
   - NMOSD: Enspryng
   - AD: gantenerumab, anti-Tau, brain shuttle
   - Huntington's disease: tominersen
   - DMD: Micro-dystrophin Gene Therapy
   - Parkinson's disease: prasinezumab

7. **Immunology**
   - IPF: rhPentraxin-2, Esbriet
   - Myelofibrosis: rhPentraxin-2
   - Lupus nephritis: Gazyva
   - Crohn's disease: etrolizumab

8. **Ophthalmology**
   - nAMD, DME, DR: Port Delivery System
   - nAMD, DME, RVO: faricimab

9. **Infectious diseases**
   - HBV: TLR7 agonist, CpAM, RG6346, RG6084
   - Influenza A/B: Xofluza
   - SARS-CoV2: Actemra
   - SARS-CoV2: REGN-COV2

Oncology / Hematology
Neuroscience
Ophthalmology
Infectious diseases
Immunology

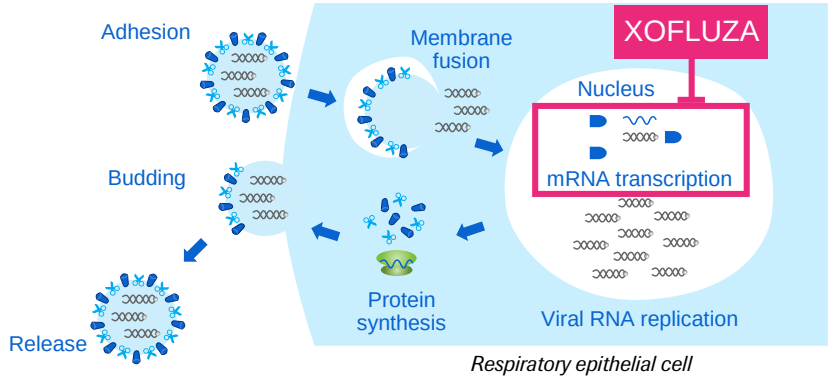
* For further information on target patient populations please consult the appendix; For further details on the late stage pipeline please consult the HY 20 results presentation appendix or visit the IR homepage

# Xofluza in influenza A/B

## *Ph III studies «prevention of transmission» and infants on-going*

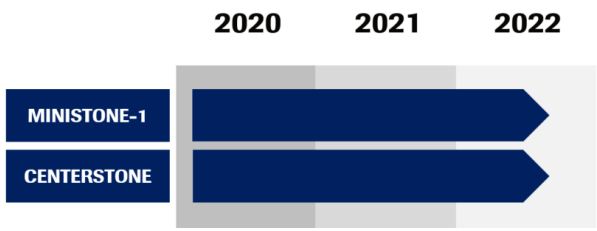
FDA emergency use authorization

### CAP dependent endonuclease inhibitor




- First-in-class small molecule inhibiting viral RNA replication; stops viral shedding + reduces viral load significantly faster than the current SOC
- Oral, single-dosing
- Safety similar to placebo
- Activity against Tamiflu-resistant and avian strains (H7N9, H5N1)

### Ph III development




- Ph III (miniSTONE-1) for infants <1yr; results expected in 2022
- Ph III (CENTERSTONE) for prevention of influenza transmission; results expected 2022
- Xofluza approved for healthy people in 24 countries; Global filings for high-risk patients, pediatrics, post-exposure prophylaxis on-going
- FDA emergency use authorization for the cobas SARS-CoV-2 + Influenza A/B test with a single sample, obtained in Q3 2020

### SARS-CoV-2 & Influenza A/B test for cobas 6800/8800

**cobas® 6800**
1,440 results in 24 hours

**cobas® 8800**
4,128 results in 24 hours

Davis, et al. Virology J 2014; Eisfeld, et al. Nat Rev Microbiol 2015; Kawaguchi, et al. ESWI 2017; von Itzstein. Nat Rev Drug Discov 2007; MOA=mechanism of action; SOC=standard of care; Baloxavir marboxil co-developed with Shionogi with Roche holding worldwide license excluding Japan and Taiwan

# Actemra in severe COVID-19 associated pneumonia

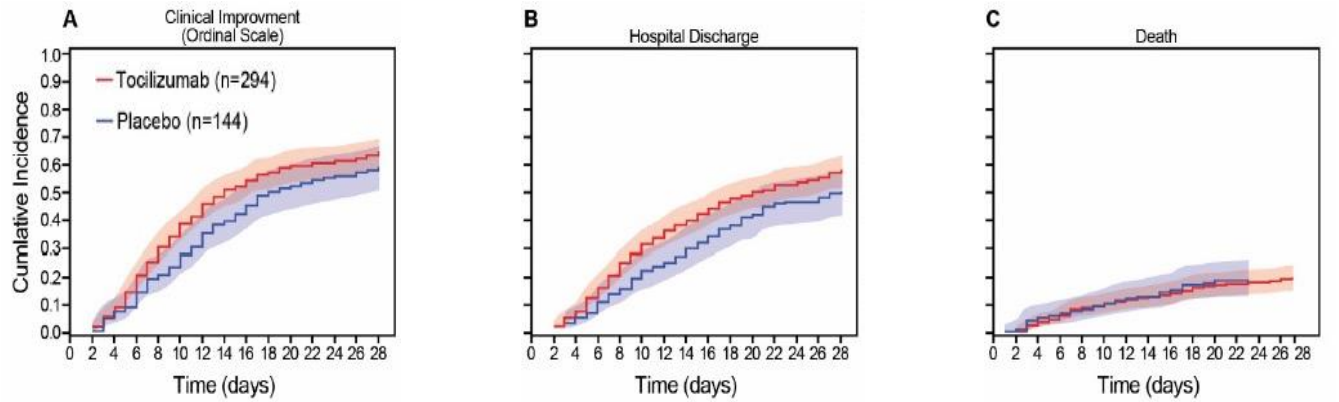
## *Ph III COVACTA: Primary and key secondary endpoints not met*

### Anti-IL6 receptor mAb

- Initially approved in RA and GCA
- Approved for CAR T-cell-induced cytokine release syndrome
- Ph III program (REMDACTA, EMPACTA, MARIPOSA, J-COVACTA) in COVID-19 associated pneumonia on-going*

### Ph III (COVACTA) in severe COVID-19 associated pneumonia[1]

**Key secondary endpoints**



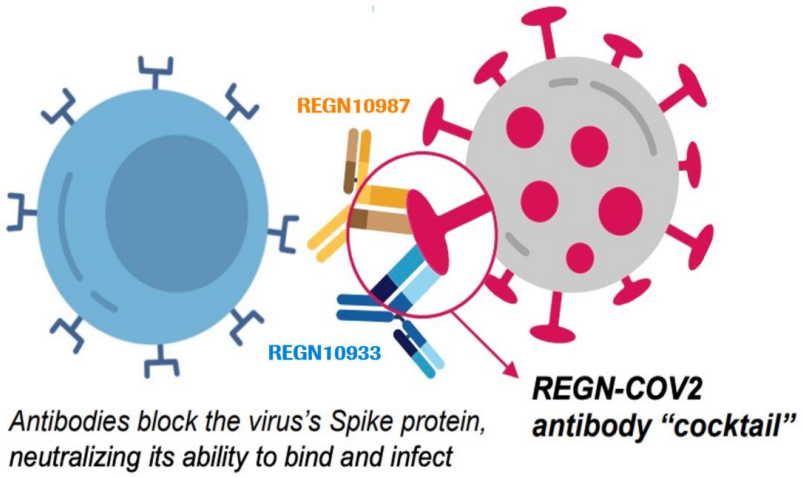

- Ph III (COVACTA) did not meet its primary endpoint of improved clinical status of patients or key secondary endpoint of reduced mortality at day 28
- Potentially clinically meaningful benefits in time to hospital discharge and duration of ICU stay
- Ph III (REMDACTA) results for Actemra + remdesivir expected in Q4 2020

1 Rosas I, et al; submitted to NEJM Aug 2020; available on medRxiv Aug 2020; RA = rheumatoid arthritis; GCA=giant cell arteritis;CAR T=chimeric antigen receptor T-cell; ICU=intensive care unit; *Additional studies are ongoing and might expand the findings of COVACTA and address outstanding scientifically and medically relevant questions regarding the risk/benefit profile of tocilizumab in COVID-19 in more narrowly defined patient populations and in conjunction with current treatments

# Neutralizing antibodies (nAbs) against SARS-CoV2

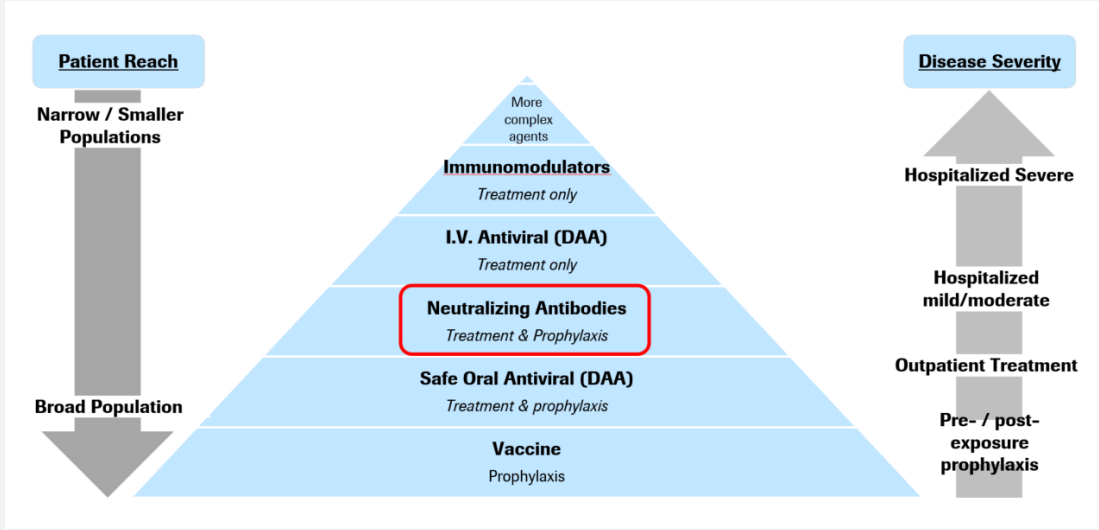
## *Promising for treatment and prophylaxis*

### REGN-COV2 (nAb cocktail)




- Two potent, virus-neutralizing Abs binding non-competitively to the critical receptor-binding domain of the virus's spike protein
- The virus would need to have multiple simultaneous mutations at multiple genetic sites in order to escape the nAb cocktail, which is an unlikely scenario*

### nAb cocktails for treatment & prophylaxis




Currently enrolling trials:

- Ph II/III study in hospitalized COVID-19 patients
- Ph II/III study in non-hospitalized COVID-19 patients
- Ph I multidose study in adult volunteers (pre-exposure)
- Ph III prophylaxis of housemates of infected individuals **
- First results expected in September 2020

* A. Baum et al., Science 10.1126/science.abd0831 (2020); In collaboration with Regeneron; ** In collaboration with NIAID

*Doing now what patients need next*