swissmedic

# Pandemic Times
## Some Insight with Hindsight

Swiss-American Chamber of Commerce

Zunfthaus Zur Meisen - March 9, 2022

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# Zunfthaus zur Meisen

**Pandemic**

Legal Provisions

Regulations

**Covid-19**

Therapeutics

Vaccines

**Science**

Speed

Collaboration

# Legal Provisions

- Already 1900 the cantons agreed about the common rules for the control of medicines, **Interkantonale Kontrollstelle für Heilmittel (IKS)** gave recommendations for the cantons (diversity in regulations at the cantonal level).
- **Swissmedic** was established in January **2002** as the first Federal Authority for therapeutic products along with the coming into force of the Therapeutic Products Act (TPA or HMG = Heilmittelgesetz)

«To protect human and animal health and to guarantee that only **high quality**, **safe** and **efficacious** therapeutic products are placed on the market.»

Art.1 TPA

# Regulations

| Name of EUP | Characteristics | | | | Advantages | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Type of EUP | | Type of product | | Facilitates development | | | Expedites authorisation | | | | |
| | Pathway created specifically for COVID-19 | An established FRP that can be used in the context of a pandemic or public health emergency | Vaccines | Therapeutics (small molecules / biologics) | Exempt from certain submission requirements | More interactions with sponsor pre-submission | Option to use rolling submission | Reliance | Formal priority review | Notification (not formally reviewed) | Conditional | Exceptional | Other |
| Ordinance on Measures to Combat the Coronavirus (COVID-19) | | | | | | | | | | | | | |
| Streamlining of the review procedure for specific medicinal product categories on request (Art. 13) | | | | | | | | | | | | | |
| Conditions for the rolling submission of data during ongoing proceedings, handling unlicensed drugs (Art. 9) | | | | | | | | | | | | | |
| Fast track | | | | | | | | | | | | | |

## Emergency Use Pathways (EUPs):

### applying regulatory flexibility in the age of COVID-19

A review of EUPs for marketing authorisations, made available by 7 major regulatory authorities and the WHO.


R&D BRIEFING 75

CIRS Centre for Innovation in Regulatory Science

# Speed

## 1 Respond

Address the acute situation and manage continuity

## 2 Recover

Learn and emerge stronger

## 3 Thrive

Prepare for and shape the "next normal"

The **"Respond" phase** requires leaders to focus on one thing: managing the crisis. Leaders have to react fast amid all this uncertainty. Addressing economic pressure as well as emotions calls for determined and highly empathetic leadership.

During the **"Recover" phase**, the "next normal" is the top priority even as leaders are still addressing the crisis at hand. Leaders need an ambidextrous posture to broaden their perspective, adapt their leadership to the crisis and ensure constructive collaboration on and buy-in for the future vision.

Moving into the **"Thrive" phase**, the "next normal" becomes reality. Leaders are confronted with all kinds of situations during business as usual and must therefore be flexible in their leadership behavior.




Deloitte 2020

# Therapeutics

Datum: 11.12.2020

LE TEMPS

Le Temps
1002 Lausanne
058 269 29 00
https://www.letemps.ch/

Medienart: Print
Medientyp: Tages- und Wochenpresse
Auflage: 32'473
Erscheinungsweise: 6x wöchentlich

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Themen-Nr.: 526.001

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Ausschnitt Seite: 1/2

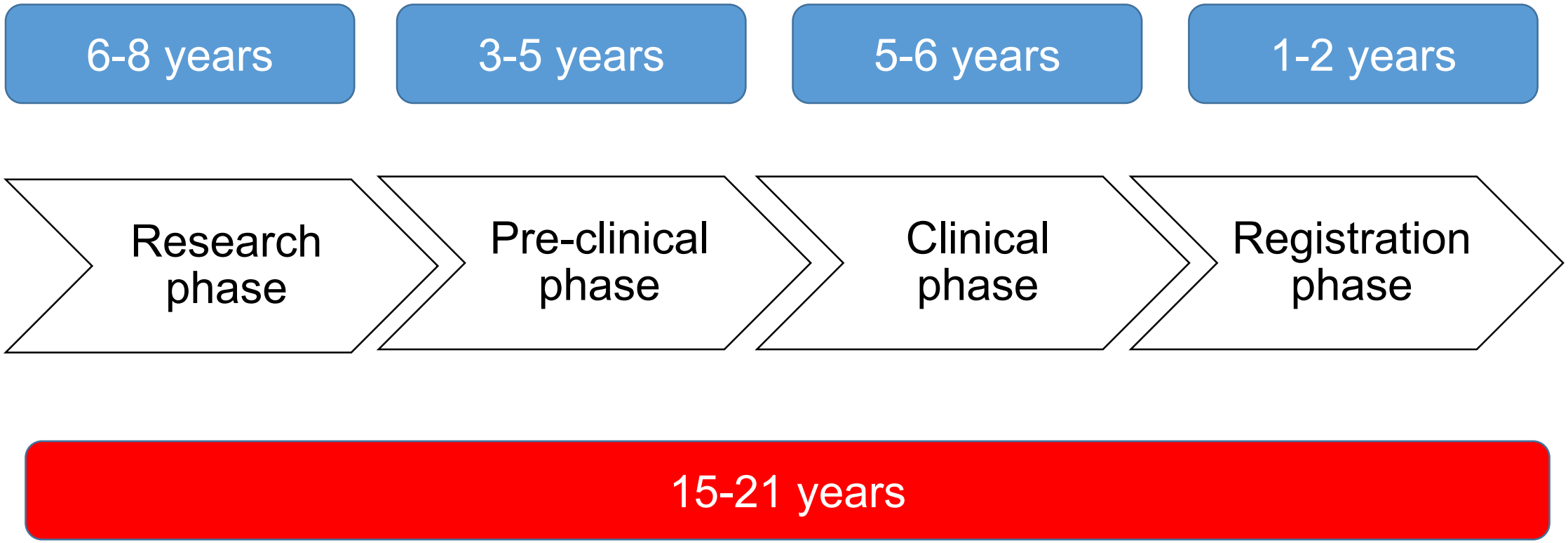
## Des millions pour un médicament inefficace

**COVID-19** Le «British Medical Journal» déconstruit le mécanisme selon lequel des Etats européens ont consacré 220 millions d'euros pour acheter le remdésivir, un médicament de Gilead pour lutter contre la fièvre d'Ebola et recyclé pour soigner le covid. Mais l'OMS le déconseille

**5,58**
C'est, en dollars, le prix de production de six doses de remdésivir, selon «Le Monde».

**2340**
C'est, en dollars, le prix de vente de six doses de remdésivir, selon «Le Monde».

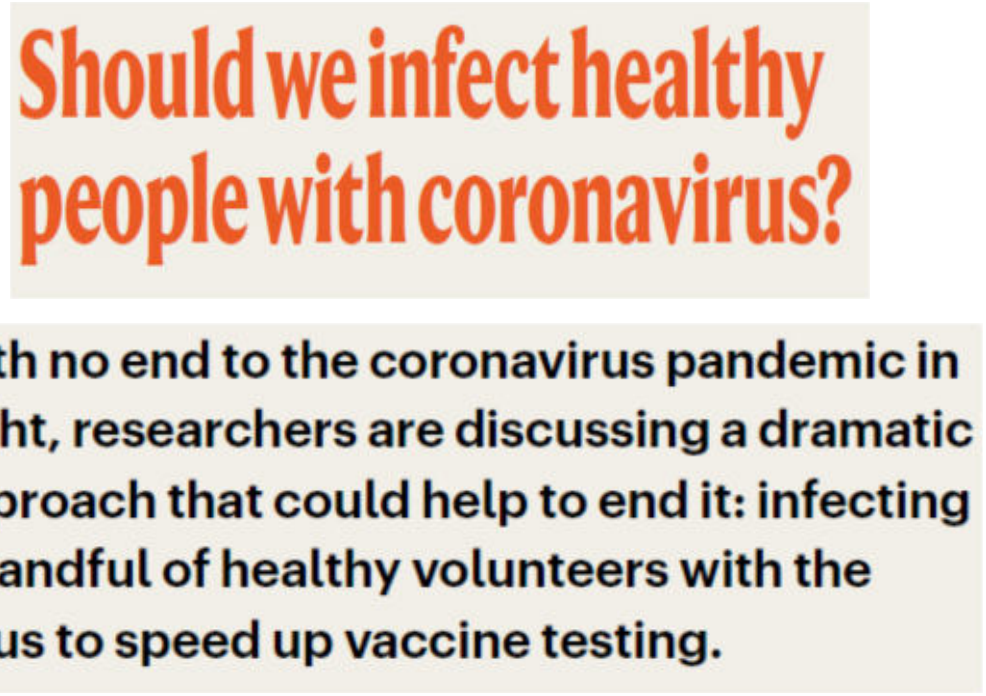
# Vaccines


6-8 years
3-5 years
5-6 years
1-2 years
Research phase
Pre-clinical phase
Clinical phase
Registration phase
15-21 years

- **Pre-clinical** phase:
  - Cell/tissue cultures and animal models
  - Assess safety and immune response
  - Starting dose for the clinical study and how to administer

- Before human studies - **First In Man**:
  - manufacturing is safe and strictly controlled (GMP)

- **Phase I:**
  - 20-100 healthy adults
  - vaccine safety
  - type/extent of immune response



Should we infect healthy people with coronavirus?

With no end to the coronavirus pandemic in sight, researchers are discussing a dramatic approach that could help to end it: infecting a handful of healthy volunteers with the virus to speed up vaccine testing.

Nature | Vol 580 | 2 April 2020

# Unwavering Regulatory Safeguards for COVID-19 Vaccines

Still, the emphasis on speed has provoked public anxiety about the safety and effectiveness of vaccines developed on expedited timelines. Among the concerns are that the regulatory standards for approval will be lowered under political pressure for a vaccine. In a recent poll of 1056 US adults, 31% indicated that they are uncertain about whether they would receive a potential COVID-19 vaccine and 20% indicated they would choose not to take it, with concerns about safety and adverse effects being the primary reason for avoiding vaccination.[3]

Speed

**Anand Shah, MD**
Food and Drug Administration, Silver Spring, Maryland.

**Peter W. Marks, MD, PhD**
Food and Drug Administration, Silver Spring, Maryland.

**Stephen M. Hahn, MD**
Food and Drug Administration, Silver Spring, Maryland.

JAMA Published online August 7, 2020

Articles

## Considerations in boosting COVID-19 vaccine immune responses

Philip R Krause, Thomas R Fleming, Richard Peto, Ira M Longini, J Peter Figueroa, Jonathan A C Sterne, Alejandro Cravioto, Helen Rees, Julian P T Higgins, Isabelle Boutron, Hongchao Pan, Marion F Gruber, Narendra Arora, Fatema Kazi, Rogerio Gaspar, Soumya Swaminathan, Michael J Ryan, Ana-Maria Henao-Restrepo

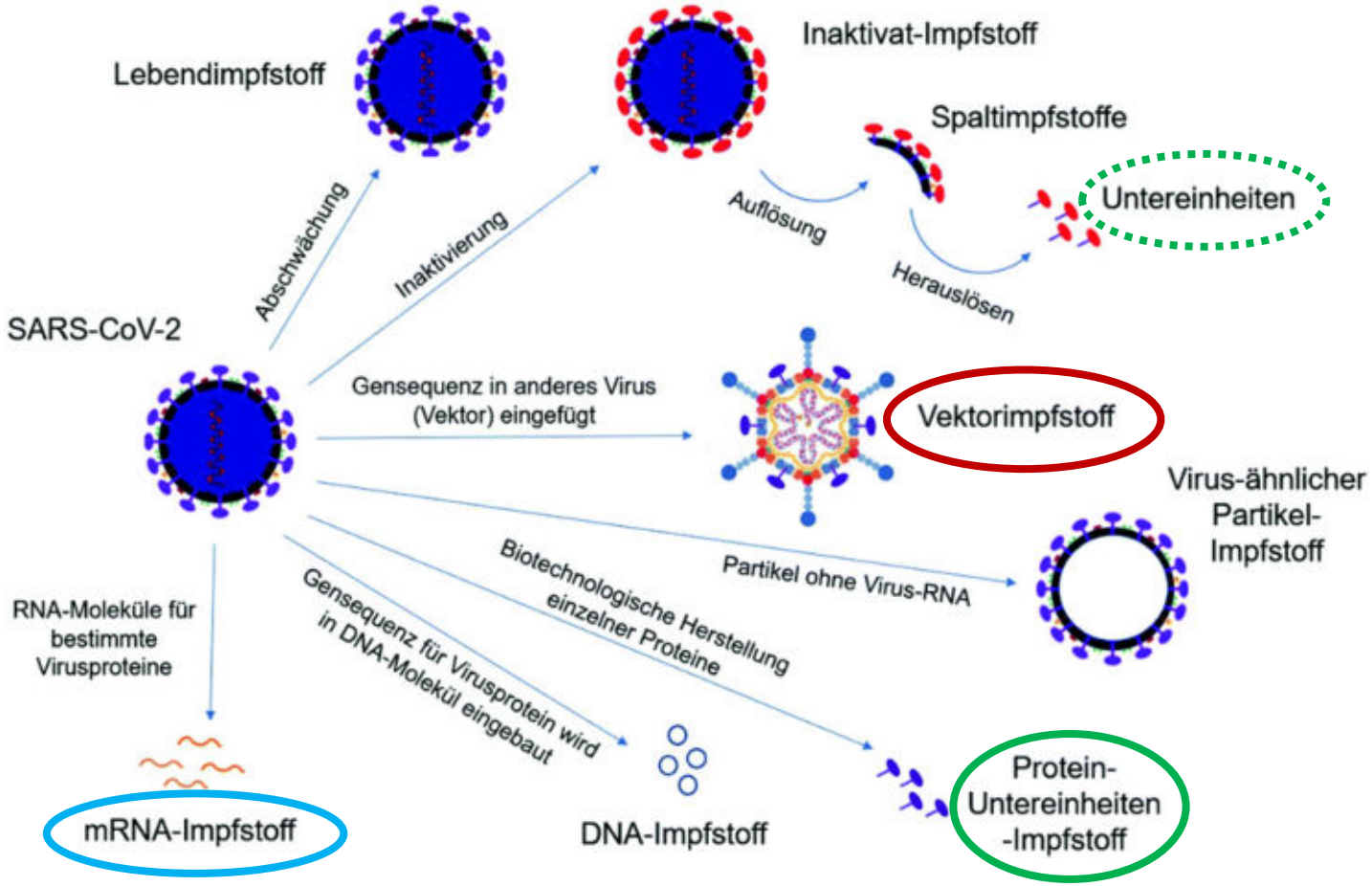
www.thelancet.com Published online September 13, 2021 https://doi.org/10.1016/S0140-6736(21)02046-8

## Effectiveness of a third dose of the BNT162b2 mRNA COVID-19 vaccine for preventing severe outcomes in Israel: an observational study

Noam Barda*, Noa Dagan*, Cyrille Cohen, Miguel A Hernán, Marc Lipsitch, Isaac S Kohane, Ben Y Reis†, Ran D Balicer†

www.thelancet.com Published online October 29, 2021 https://doi.org/10.1016/S0140-6736(21)02249-2

# Vaccines




**vector based**
(e.g. AstraZeneca/Uni Oxford, *Janssen J&J*)

**mRNA based**
(e.g. BioNTech/Pfizer, *Moderna*)

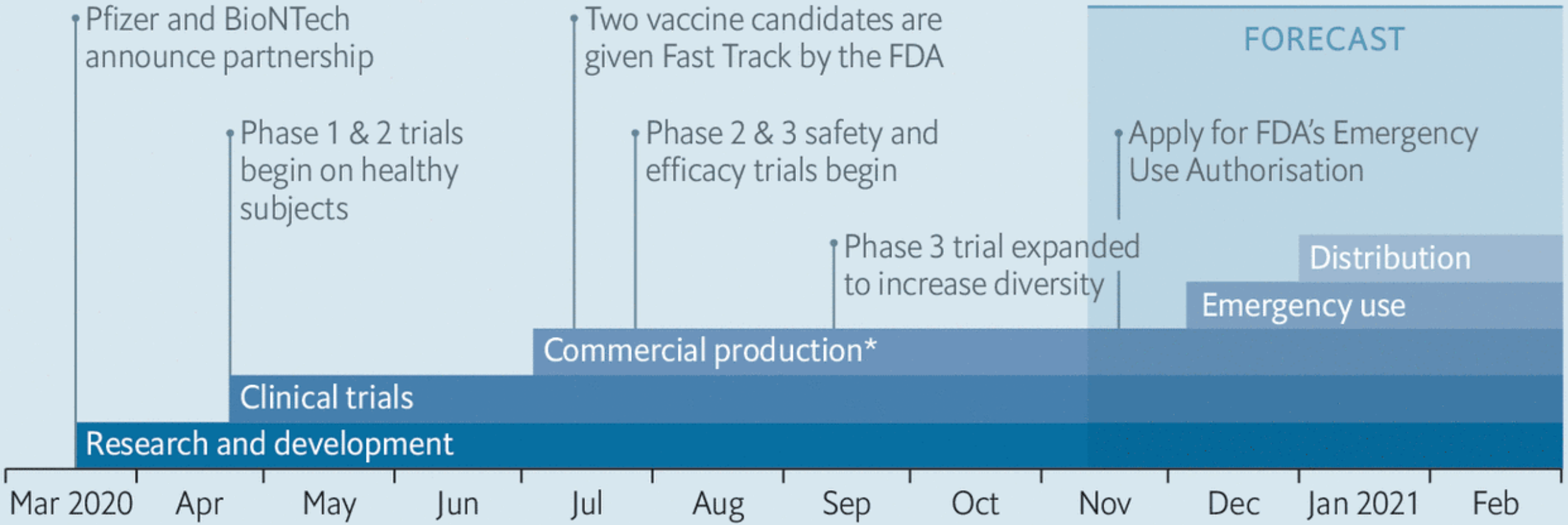
**protein based**
(e.g. *Novavax*)

«https://link.springer.com/chapter/10.1007/978-3-658-31340-1_3»

# Speed

## Like a shot

Key events in the development of Pfizer/BioNTech's covid-19 vaccine




Sources: Pfizer; ASTHO

*Estimate based on Pfizer's press releases

The Economist

The BMJ

pdoshi@bmj.com

Cite this as: *BMJ* 2020;371:m4037
http://dx.doi.org/10.1136/bmj.m4037
Published: 21 October 2020

# Will covid-19 vaccines save lives? Current trials aren't designed to tell us

The world has bet the farm on vaccines as the solution to the pandemic, but the trials are not focused on answering the questions many might assume they are. **Peter Doshi** reports

**Table 1 | Characteristics of ongoing phase III covid-19 vaccine trials**

| | Moderna | Pfizer | AstraZeneca (US) | AstraZeneca (UK) | Janssen | Sinopharm* | Sinovac |
|---|---|---|---|---|---|---|---|
| Vaccine name | mRNA-1273 | BNT162 | AZD1222 | AZD1222 | Ad26.COV2.S | Sinopharm vaccine | Sinovac CoronaVac |
| Registration No | NCT04470427 | NCT04368728 | NCT04516746 | NCT04400838 (UK), NCT04536051 (Brazil), NCT04444674 (South Africa) | NCT04505722 | NCT04510207 | NCT04456595 |
| Target enrolment | 30 000 | 43 998 | 30 000 | 19 330 | 60 000 | 45 000 | 8870 |
| Ages eligible | 18+ | 12+ | 18+ | 5-12, 18+ | 18+ | 18+ | 18+ |
| Protocol publicly available | Y | Y | Y | N† | Y | N | N |
| Notable excluded populations: | | | | | | | |
| Children and adolescents | Excluded | Many excluded | Excluded | 13-17 excluded | Excluded | Excluded | Excluded |
| Immunocompromised patients | Excluded | Excluded | Excluded | Excluded | Excluded | Excluded | Excluded |
| Pregnant or breastfeeding women | Excluded | Excluded | Excluded | Excluded | Excluded | Excluded | Excluded |
| Endpoints undergoing formal study‡: | | | | | | | |
| Prevention of symptomatic disease in vaccine recipient | Y | Y | Y | Y | Y | Presumably§ | Y |
| Reduction in severe covid-19 (hospital admission, ICU, or death) | N | N | N | N¶ | N | N | N |
| Interruption of transmission (person to person spread) | N | N | N | N | N | N | N |

- Reports that say that something hasn't happened are always interesting to me, because as we know, there are known knowns; there are things we know we know. We also know there are known unknowns; that is to say we know there are some things we do not know. But there are also unknown unknowns—the ones we don't know we don't know.
- …, it is the latter category that tend to be the difficult ones.[1]

1 *"Defense.gov News Transcript: DoD News Briefing – Secretary Rumsfeld and Gen. Myers, United States Department of Defense (defense.gov)" (Feb 2, 2002)*

# What we didn't know (at the time of approval):

**Evidence base N<200**

**Primarily 18 – 65 yr old healthy participants**

- Younger / older age groups?
- Co-morbidities: asthma, diabetes, hypertension, autoimmune diseases etc.?
- Pregnant women?
- Hospital admissions, incl. ICU (intensive care units), mortality?
- Duration of protection & re-infections?
- Transmissions?

# Schnellboot, nicht Schnecke

**Swissmedic** Die Heilmittelbehörde sei in der Corona-Krise zu langsam. Das stimmt nicht. Das Problem liegt eher bei Gesundheitsminister Alain Berset.

Impfstoff: Warum braucht es bis zur Zulassung so viel Zeit?

Datum: 13.12.2020

Sonntags Blick

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8008 Zürich
044/ 259 62 62
www.blick.ch/sonntagsblick

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Medientyp: Tages- und Wochenpresse
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Fläche: 117'873 mm²

Auftrag: 526001
Themen-Nr.: 526.001

Referenz: 79229323
Ausschnitt Seite: 1/4

## 60 Tage für Zulassung

**Pfizer/Biontech** Das Zulassungsgesuch für diesen Impfstoff ging am 19. Oktober 2020 ein. Swissmedic erteilte dafür eine reguläre Zulassung am 19. Dezember, also nach 60 Tagen. Normalerweise dauert eine solche Impfstoffzulassung sechs bis zwölf Monate.

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**Swissmedic war schneller und gründlicher als die gerühmte US-Behörde.**

Impfchef von **Swissmedic** über die Zulassung von Impfstoffen

# «Abstriche bei der Sicherheit wären fatal»

**Claus Bolte ist derzeit** der gefragteste Mann der Schweiz. Er entscheidet bei Swissmedic über die Zulassung der Impfstoffe. Eine heikle Aufgabe.

**Science**

- Safety – Efficacy - Quality

**Speed**

- Presubmission & Scientific Advice – Rolling Reviews

**Colla-boration**

- Reliance- Worksharing - Internat. Standards

| | EMA *OPEN* | Access (HC, TGA, HSA, MHRA, SMC) | ICMRA Cluster (FDA etc.) | WHO |
|---|---|---|---|---|
| COVID-19 Vaccines | X | X | X | X |
| Influenza Vaccines | | X | | X |
| Anti-Virals | X | X | X | X |
| Antibodies | X | | X | |
| Guidance (Safety, Efficacy, Quality) | X | X | X | X |
| SARS-Cov2 Variants | X | X | X | |

Original Research (Regulatory Science)

DIA

Therapeutic Innovation & Regulatory Science 1-9
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DOI: 10.1177/2168479018764660
tirs.sagepub.com

# A Comparative Review of Marketing Authorization Decisions in Switzerland, the EU, and the USA

Simon Dalla Torre Di Sanguinetto, PhD[1], Esa Heinonen, MD, PhD[2], Janine Antonov, PhD[3], and Claus Bolte, MD, MBA[1]

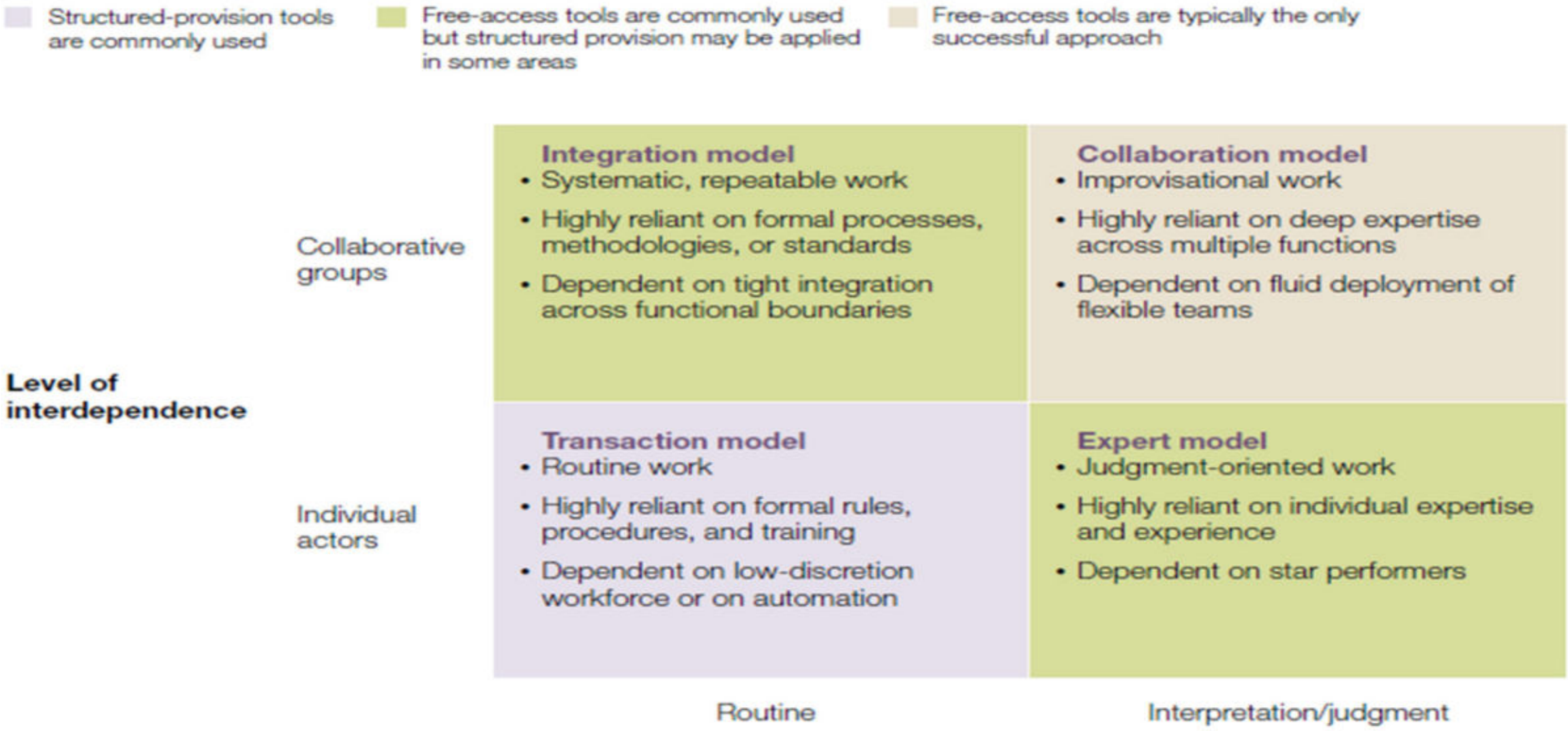
## Abstract

*Background:* In this study we compared Swissmedic's (SMC's) regulatory marketing authorization decisions to those of the US Food and Drug Administration (FDA) and European drug regulatory authorities (EU). We investigated the overall similarity of the regulatory decisions, approval, and postmarketing withdrawal rates in the 3 jurisdictions. In case regulatory decisions diverged, we analyzed the reasons for rejection of marketing authorization applications (MAAs). *Methods:* The study comprises 255 new molecular entity (NME) MAAs assessed by SMC by the EU and FDA between 2005 through 2014. Study parameters included the regulatory decision, postmarketing withdrawal rates, and the official reasons for rejection. *Results:* Regulatory decisions converged to a high degree among all 3 agencies (between 84% and 90%). SMC's average approval rate (84%) was slightly lower than those of the FDA (87%) and the EU (91%). Postmarketing withdrawal rates were generally low (4%-5%) but were 3 to 5 times higher when decisions among the drug regulatory authorities (DRAs) diverged. SMC's primary grounds for rejection were lack of efficacy (45%) and safety (40%). *Conclusions:* The 3 investigated DRAs adhere largely to the same scientific principles and regulatory guidelines; therefore, remaining disparities ought to be considered in a cultural, legal and public health priority context.


**Table 2.** Distribution of Diverging Decisions on MAAs Reviewed in All 3 Jurisdiction.

| Initial MAA Decision Pattern | Proportion of MAAs in Decision Pattern |
|---|---|
| SMC + / EU + / FDA − | 16 / 50 (32%) |
| SMC + / EU − / FDA + | 3 / 50 (6%) |
| SMC + / EU − / FDA − | 0 / 50 (0%) |
| SMC − / EU + / FDA + | 15 / 50 (30%) |
| SMC − / EU + / FDA − | 7 / 50 (14%) |
| SMC − / EU − / FDA + | 9 / 50 (18%) |

Abbreviations: MAA, marketing authorization application; SMC, Swissmedic.




*Davenport, T – McKinsey*

# Collaboration

## National

FDA U.S. FOOD & DRUG ADMINISTRATION

## Regional

EUROPEAN MEDICINES AGENCY
SCIENCE MEDICINES HEALTH

ACCESS CONSORTIUM
AUSTRALIA
CANADA
SINGAPORE
SWITZERLAND
UNITED KINGDOM

## Global

ICMRA
International Coalition of Medicines Regulatory Authorities

World Health Organization

PROJECT ORBIS

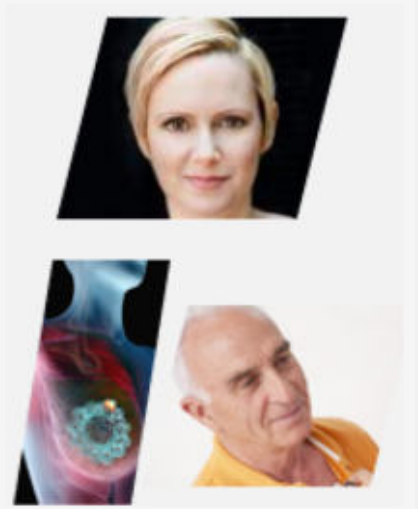
# New Approaches to Regulatory Innovation Emerging During the Crucible of COVID-19 – *Wegner, M; Bolte, C; Jefferys, D*

The use of mobile tools and digital technologies, including video technologies, have become more sophisticated, collaborative, and accepted! How can we leverage this ?

**Decentralized clinical trials/ hybrid study approaches**

**Increased use of telemedicine**

**Use of digital tools in development to measure endpoints**



**Direct shipment of study medicines to patient homes**

# Personal

Gesendet: Sonntag, 6. Dezember 2020 16:15
An: Bolte Claus Swissmedic <claus.bolte@swissmedic.ch>
Betreff: Sie sind ein Held

DANKE!!!!!!!

Sie sind einer der letzten, die frei sagen, was Sie denken.

Ich halte die Impfungen gegen Covid zum gegenwärtigen Forschungsstand für untragbar, grob fahrlässig und absolut unverantwortlich.

Bleiben Sie stark.

**Gesendet:** Mittwoch, 3. Februar 2021 19:37
**An:** Bolte Claus Swissmedic <claus.bolte@swissmedic.ch>
**Betreff:** CORONA: Gottes (letzter) Weckruf!?

Lieber Herr Dr. Claus Bolte

Als ich Sie heute im Beitrag der Tagesschau gesehen habe, hatte ich das starke Gefühl, auch Ihnen meinen Eindruck bzgl. CORONA zustellen zu „müssen".

*Emeritus* Research Professor, LSE & Director CSIRU (+44 07958 623716 on SIGNAL)
c.c. Sir Richard Dearlove, Chairman CSI and Chairman of the Advisory Board, CSIRU

I write to you stimulated by your reported remarks of last Tuesday with which we are in complete agreement, namely that, "we lack data on the effectiveness of the clinical trials and on the important subgroups that participated in these large studies."

- **The CSI was founded as a Registered Charity to support international studies, adjunct to the University of Cambridge, by the Chairman, Sir Richard Dearlove, during his tenure as Master of Pembroke College. Previously, Sir Richard was the Chief of the British Secret Intelligence Service. He is now Chairman of the Trustees of the University of London.**

-----Ursprüngliche Nachricht-----
Von: Klaus Dogwiler <klaus.dogwiler@bluewin.ch>
Gesendet: Samstag, 19. Dezember 2020 23:33
An: Bolte Claus Swissmedic <claus.bolte@swissmedic.ch>
Betreff: Zulassung Corona!

Gratulation zu Ihrem Resultat und ihrer Arbeit Ich habe mich zur Impfung bereits angemeldet da ich in meine ehemalige Institution grosses Vertrauen habe. Ich werde von Pflege Seite her oft gefragt, ob ich als „Ehemaliger" der Zulassungbehörde mich sofort impfen lassen werde...?
Selbst wenn ich nicht überzeugt wäre, würde ich ja sagen. Aber ich werde das RnA Teil bei mir gerne willkommen heissen.
Ihnen weiterhin Erfolg und Freude an der Aufgabe.
Herzlichst grüsst Sie Ihr
Klaus Dogwiler

Gesendet: Samstag, 28. November 2020 08:19
An: Bolte Claus Swissmedic <claus.bolte@swissmedic.ch>
Betreff: Anfrage betr. Kleidung

Sehr geehrter Herr Dr. Bolte

In der Tagesschau vom 27. Nov. 20 oder war es 10vor10 hatten Sie ein braunes Daunengilet an. Darf ich Sie fragen woher Sie das haben? Ich möchte gerne meinem Ehemann ein solches schenken.

Falls Sie die Zeit finden mir zu antworten, bedanke ich mich zum voraus bestens.

**Gesendet:** Dienstag, 1. Juni 2021 11:08
**An:** Bolte Claus Swissmedic <claus.bolte@swissmedic.ch>
**Betreff:** Gegen die Zulassung von Corona-Impfungen für 12- bis 15-Jährige

Sehr geehrter Herr Dr. Bolte

Als betroffene Elter möchten wir ein Statement gegen die Zulassung des Pfizer/BioNTec - Impfstoffs für Kinder und Jugendliche abgeben.

Wir sind dezidiert dagegen, dass ein **experimenteller (!), gentechnologischer (!), nicht auf Langzeitfolgen geprüfter (!) Pseudo-Impfstoff** für Kinder und Jugendliche zugelassen wird!!!