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An open letter to:

8 March 2017

The Hon. Malcolm Turnbull, MP
Prime Minister of Australia

Prime Minister Turnbull

RE: COERCIVE OVER-VACCINATION OF CHILDREN AND THE FLAWED NO JAB, NO PAY LAW

Prime Minister Turnbull, it is alarming that Senator Pauline Hanson has been so aggressively attacked and bullied by you and others for representing parents' legitimate concerns about vaccination policy and practice.¹ In our liberal democracy we must be allowed to freely question government mandated medical interventions, i.e. vaccination.

Children in Australia are being grossly over-vaccinated with a plethora of vaccine products, and this is occurring with the support of the medical/scientific establishment, politicians, coercive vaccination lobby groups, and the mainstream media.

Currently children aged from birth to 15 years will have at least 46 doses of vaccines via combined vaccine products and revaccinations². This does not include the dubious flu vaccinations we are all being pressured to have every year. More vaccine products are in the pipeline, e.g. the Bexsero meningococcal B vaccine which has been rejected **three times** by the PBAC due to 'multiple uncertainties'³ about this vaccine product for a rare disease⁴. Vaccine manufacturer GlaxoSmithKline is determined that this aluminium-adjuvanted vaccine product will be added to the schedule, and is currently trying to impose this vaccine via the states, i.e. South Australia in the first instance.⁵

The general public is unaware that there are serious conflicts of interest in the Australian government's vaccination bureaucracy, with the committee that 'recommends' vaccine products for the taxpayer funded vaccine schedule (ATAGI) being colonised by academics who have associations with the vaccine industry, e.g. via funding for their participation in vaccine product clinical trials, and funding to participate in vaccine conferences etc.⁶ (See my letter to former Prime Minister Tony Abbott – [Vaccination policy and practice in Australia – lack of transparency and accountability](#) (21 January 2015) and [my email to former Chief Medical Officer Chris Baggoley](#) (23 June 2016) on this topic.)

There is a serious lack of transparency and accountability for the Australian government's vaccination policy, and lack of consultation with the community about the addition of new vaccine products to the schedule. The mainstream media, including the taxpayer funded ABC and SBS, is an unquestioning avid supporter of 'vaccination', and is failing to provide critical analysis of the worth of individual vaccine products and revaccinations.

Prime Minister Turnbull, I request you undertake an urgent independent and objective review of Australia's taxpayer funded vaccination schedule, including consideration of informed citizens' input on this matter. This is particularly urgent since the imposition of the Australian government's coercive No Jab, No Pay law. This is a bad law which conflicts with the obligation for valid consent before vaccination, with serious implications for the bodily autonomy of 'pre-citizens', i.e. children. (See my letters to former Prime Minister Tony Abbott dated [22 June 2015](#) and [26 August 2015](#) and my submission re the [No Jab, No Pay Bill](#) (16 October 2015)).

In the first instance I request you:

- **Initiate an urgent review of industry and politically motivated Gardasil HPV vaccination**, which was fast-tracked in dubious circumstances in the run-up to the 2007 Federal election, after its original rejection by the PBAC in 2006. For your information, I am currently undertaking detailed correspondence on HPV vaccination with Cochrane Nordic and the Editor-in-Chief of the medical journal *The BMJ*, including discussion about:
 - the lack of evidence for multiple HPV vaccine doses;
 - the lack of evidence for prevention of cancer;
 - the lack of scientific knowledge about HPV vaccination, i.e. scientists such as Professor Diane Harper admit **"the mechanism of immunogenicity from a scientific perspective is poorly understood"**;
 - the novel turbo-charged aluminium adjuvants in the VLP HPV vaccine products, which are reported to induce **unnaturally** high antibody titres, many fold higher than natural HPV infection;
 - the potential for a continuous shift in HPV types ('type replacement') as a result of vaccination, and the uncertainties this brings;
 - fear-mongering about the risks of HPV and misleading information;
 - political interference in the implementation of HPV vaccination, e.g. in Australia, which had a domino effect in fast-tracking HPV vaccination around the world;
 - the lack of independent and objective evaluation of HPV vaccination; and
 - the lack of 'informed consent' before HPV vaccination, children are guinea pigs in this global experiment.

Hyperlinks to my detailed and fully referenced correspondence on these matters can be accessed on this webpage: <https://over-vaccination.net/cochrane-collaboration/> I also forwarded a detailed letter to former Prime Minister Tony Abbott – [Challenging compulsory vaccination with the Gardasil HPV vaccine](#) (4 July 2015).

- **Take steps to ensure parents are offered the option of antibody titre testing (i.e. a blood test) to verify immunisation after vaccination with the *first* dose of live measles, mumps and rubella (MMR) vaccine** (an option parents may be willing to pay for themselves), **and that parents not be compelled to have their children over-vaccinated with a *second* dose of live MMR vaccine if they are already immune after the first dose.** (See my letter to former Prime Minister Tony Abbott – [Challenging compulsory revaccination with the second dose of live MMR vaccine](#) (4 August 2015) and [my email to former Chief Medical Officer Chris Baggoley](#) (16 June 2016).
- **Undertake a review into varicella/chickenpox vaccination, including via the MMRV.** It is notable that the UK NHS has not implemented chickenpox vaccination, why have we done it here? The UK NHS notes: *“There’s a worry that introducing chickenpox vaccination for all children could increase the risk of chickenpox and shingles in adults. While chickenpox during childhood is unpleasant, the vast majority of children recover quickly and easily. In adults, chickenpox is more severe and the risk of complications increases with age. If a childhood chickenpox programme was introduced, people would not catch chickenpox as children because the infection would no longer circulate in areas where the majority of children had been vaccinated. This would leave unvaccinated children susceptible to contracting chickenpox as adults, when they are more likely to develop a more severe infection or a secondary complication, or in pregnancy, when there is a risk of the infection harming the baby. We could also see a significant increase in cases of shingles in adults. Being exposed to chickenpox as an adult – for example, through contact with infected children – boosts your immunity to shingles. If you vaccinate children against chickenpox, you lose this natural boosting, so immunity in adults will drop and more shingles cases will occur.”*⁷ **Again, why have we interfered with the natural progression of this mild childhood disease and implemented varicella/chickenpox vaccination in Australia, without consultation with the community?** Now the Immunise Australia Program is pushing taxpayer-funded shingles vaccination for 70-79 year olds.⁸ Is shingles a problem the Australian government has created by implementing varicella/chickenpox vaccination?
- **Initiate an urgent review into repeated revaccination throughout life with the aluminium-adsorbed diphtheria, tetanus and acellular pertussis/whooping cough vaccine.** Repeated so-called ‘boosters’ with the apparently defective acellular pertussis/whooping cough vaccine may actually be causing new strains of the disease to develop⁹, and spreading the disease via vaccinated individuals¹⁰. Children are now having **six** vaccinations with the combination diphtheria, tetanus and acellular pertussis vaccine, i.e. primary vaccination at 2 months, 4 months and 6 months, then so-called ‘boosters’ at 4 years, and between 10-15 years¹¹, plus another ‘booster’ at 18 months has been implemented since the No Jab, No Pay law came into effect.^{12 13 14} And it doesn’t stop there as, in an attempt to protect newborns from whooping cough, (which may cause death in babies in rare cases^{15 16}), pregnant women, household contacts of infants, and healthcare workers are also being urged to be revaccinated again and again with the diphtheria, tetanus and acellular pertussis vaccine, in other words lifelong revaccination.¹⁷ What is the point of imposing more and more so-called ‘boosters’ with an apparently defective vaccine which may actually be causing new strains of the disease to develop¹⁸, and spreading the disease via vaccinated individuals¹⁹. What sort of ‘science’ is this? The so-called ‘vaccination experts’ seem to be making this up as they go along, and using the population as guinea pigs. Certainly these repeated revaccinations must be a very lucrative profit centre for vaccine manufacturers, can we look forward to this occurring with other vaccine products too, e.g. HPV vaccination? The problems with the acellular pertussis vaccine raise important questions about “what defines immunity?”, “what is a vaccine preventable disease?”, and “what level of disease risk justifies mass vaccination?” (It is also interesting to consider if research which indicates some vaccines might support the evolution of more virulent viruses²⁰ may also have implications for non-viral vaccines such as pertussis.) (See [my email to former Chief Medical Officer Chris Baggoley](#) (29 February 2016).
- **Urgently address misleading statements on aluminium and vaccine safety in *The Australian Immunisation Handbook* and the National Centre for Immunisation Research & Surveillance (NCIRS) Fact Sheet on Vaccine Components**, and other publications, as detailed in [my letter to former Chief Medical Officer Chris Baggoley](#) (25 May 2016), and referenced again in [my follow up email to Professor Baggoley](#) (3 June 2016).
- **Take action to ensure citizens can freely access information about the cost of taxpayer funded vaccine products on the National Immunisation Program Schedule**, similar to that provided by the United States Centers for Disease Control and Prevention, i.e. the [CDC Vaccine Price List](#). (See [my letter to former Prime Minister Tony Abbott](#) (10 August 2015).

Prime Minister Turnbull the Australian government’s No Jab, No Pay law is a travesty. It is being used to force parents to comply with an ever-increasing list of vaccine products and revaccinations, medical interventions which are being imposed without consultation with citizens. We must have transparency and accountability for the vaccination schedule. **I again request you implement an urgent review of the taxpayer funded vaccination schedule.**

Elizabeth Hart

<https://over-vaccination.net/>

References:

¹ See: **Pauline Hanson joins Insiders**, ABC, 5 March 2017: <http://www.abc.net.au/insiders/content/2016/s4630647.htm> **Turnbull slams Hanson's accusation of government 'blackmailing' parents into vaccination**. 9News, 5 March 2017: <http://www.9news.com.au/national/2017/03/05/13/57/not-vaccinating-risks-health-of-kids-pm> **Hanson vaccination stance branded 'crazy'**. SBS, 6 March 2017: <http://www.sbs.com.au/news/article/2017/03/06/hanson-vaccination-stance-branded-crazy> **Health groups demand Pauline Hanson retract 'fringe' vaccination comments**. ABC The World Today: <http://www.abc.net.au/news/2017-03-06/health-groups-appalled-by-hanson-vaccination-remarks/8328714> **Malcolm Turnbull slaps down Pauline Hanson on vaccinations, Putin**. The Australian, 5 March 2017: <http://www.theaustralian.com.au/national-affairs/malcolm-turnbull-slaps-down-pauline-hanson-on-vaccinations-putin/news-story/b89f0df969dc6b2022cfbcf0b61a0404> **Malcolm Turnbull slaps down Pauline Hanson over remarks on Vladimir Putin, vaccines**. The Sydney Morning Herald, 6 March 2017: <http://www.smh.com.au/federal-politics/political-news/malcolm-turnbull-slaps-down-pauline-hanson-over-remarks-on-vladimir-putin-vaccines-20170305-gur2e1.html> **Malcolm Turnbull slams Pauline Hanson for comparing the Federal Government to a 'dictatorship' over its 'no jab, no pay' policy**. Daily Mail, 5 March 2017: <http://www.dailymail.co.uk/news/article-4282822/PM-needles-Pauline-Hanson-no-jab-no-pay-criticism.html>

² I calculate at least 46 doses of individual vaccines ie breaking down combination vaccines and including revaccinations on the general schedule for children aged from birth to 15 years ie:

4 x Hepatitis B

6 x Diphtheria

6 x Tetanus

6 x Acellular pertussis

4 x Haemophilus influenza type b

4 x Inactivated poliomyelitis

3 x Pneumococcal conjugate

2 x Rotavirus (possibly 3 doses, see note b on the schedule)

1 x Meningococcal C

2 x Measles

2 x Mumps

2 x Rubella

1 x Varicella (Chickenpox)

3 x Human papillomavirus

Total 46 doses of vaccines. Also consider many children are being vaccinated with annual flu vaccines too, and are being set up for annual flu vaccination for life - another profit centre for Big Pharma. Plus Aboriginal and Torres Strait Islanders and 'medically at risk groups' are recommended to get annual flu vaccines plus additional Pneumococcal conjugate (13vPCV) and Pneumococcal polysaccharide (23vPPV) vaccines.

Refer to the National Immunisation Program Schedule (From November 2016):

[http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/5403D77C07E1973ACA257D49001E3775/\\$File/NIP-schedule2016.pdf](http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/5403D77C07E1973ACA257D49001E3775/$File/NIP-schedule2016.pdf)

³ See **Recommendations made by the PBAC July 2015 – Subsequent decisions not to recommend**. In relation to the GSK Multicomponent Meningococcal Group B Vaccine (4CMENB) the PBAC made this statement: *"The PBAC rejected the re-submission requesting listing of the 4CMenB vaccine on the NIP Schedule for the prevention of meningococcal B disease in infants and adolescents. The basis of the rejection was that the re-submission did not address multiple uncertainties in relation to the clinical effectiveness of the vaccine against the disease when delivered in a vaccination program, that the use of optimistic assumptions about the extent and duration of effect and herd immunity as raised by the PBAC in previous consideration of this vaccine were not addressed, and the unacceptably high and uncertain ICER, presented in the re-submission."* Other statements about this vaccine were also made in the PBAC July 2015 document, refer to this link: <http://www.pbs.gov.au/industry/listing/elements/pbac-meetings/pbac-outcomes/2015-07/web-outcomes-july-2015-subsequent-decision-not-to-recommend.pdf>

⁴ "Invasive meningococcal B disease (IMD) is a rare disease caused by the bacterium *Neisseria meningitidis*." PBS Public Summary Document – Multicomponent Meningococcal Group B Vaccine, 0.5mL, injection, prefilled syringe, Bexsero® - November 2013:

<http://www.pbs.gov.au/info/industry/listing/elements/pbac-meetings/psd/2013-11/meningococcal-vaccine>

⁵ SA Health Minister Jack Snelling said: "This really is a landmark study and is going to be very important as we try to convince the Commonwealth Government to have this vaccination on the PBS, so all Australians can be protected against this terrible, terrible disease." **SA Health, University of Adelaide roll out meningococcal B vaccine trial**. ABC News, 13 December 2016:

<http://www.abc.net.au/news/2016-12-13/sa-students-offered-free-meningococcal-b-vaccine/8114926>

⁶ See ATAGI Conflict of Interest document:

[http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/FC7BB2DC63225F8ACA257D770012DBF7/\\$File/ATAGI-conflict-interest.pdf](http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/FC7BB2DC63225F8ACA257D770012DBF7/$File/ATAGI-conflict-interest.pdf) Brief conflict of interest information only became available after I wrote to former Prime Minister Tony Abbott on this matter, refer to my letter dated 21 January 2015:

http://users.on.net/~peter.hart/Letter_to_Tony_Abbott_PM_re_vax_policy.pdf

⁷ **Chickenpox vaccine FAQs. NHS Choices**: <http://www.nhs.uk/Conditions/vaccinations/Pages/chickenpox-vaccine-questions-answers.aspx>

⁸ **Herpes-zoster (Shingles)**. Immunise Australia Program:

<http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/immunise-herpes-zoster>

⁹ In March 2012, The Conversation reported on a new strain of whooping cough that appears to be resistant to vaccination i.e. "A team led by scientists at The University of New South Wales believes the emerging strain of the Bordetella pertussis bacterium may be evading the effects of the widely-prescribed acellular vaccine (ACV) and increasing the incidence of the potentially fatal respiratory illness, according to a study published in The Journal of Infectious Diseases". See **Vaccine-resistant whooping cough takes epidemic to new level**: <https://theconversation.com/vaccine-resistant-whooping-cough-takes-epidemic-to-new-level-5959> In The Conversation article, Lyn Gilbert, a Professor in Medicine and Infectious Diseases at the University of Sydney, said there was a

range of ways scientists might tackle the new strain of whooping cough, including administering “more boosters of the current vaccine”. The question is, **how does increasing the numbers of ‘boosters’ of the current vaccine protect against the new strain?** Also see my email enquiries on this matter to Lyn Gilbert and Ruiting Ian in December 2012: http://users.on.net/~peter.hart/W/whooping_cough_enquiry.pdf which did not receive a response. Also see Octavia, S. et al. **Newly Emerging Clones of Bordetella pertussis Carrying prn2 and ptxP3 Alleles Implicated in Australian Pertussis Epidemic in 2008-2010**. JID 2012:205 (15 April). Brief Report: <http://jid.oxfordjournals.org/content/early/2012/03/14/infdis.jis178.full.pdf+html> and **Sharp rise in cases of new strain of whooping cough**. UNSW Australia Newsroom, 21 March 2012: <https://newsroom.unsw.edu.au/news/health/sharp-rise-cases-new-strain-whooping-cough>

¹⁰ See for example **FDA study helps provide an understanding of rising rates of whooping cough and response to vaccination**. FDA News Release, 27 November 2013: <http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm376937.htm> and Jason M Warfel et al. **Acellular pertussis vaccines protect against disease but fail to prevent infection and transmission in a nonhuman primate model**. PNAS, 22 October 2013: <http://www.pnas.org/content/111/2/787.full.pdf>

¹¹ Refer to the National Immunisation Program Schedule (From November 2016): [http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/5403D77C07E1973ACA257D49001E3775/\\$File/NIP-schedule2016.pdf](http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/5403D77C07E1973ACA257D49001E3775/$File/NIP-schedule2016.pdf)

¹² At its meeting in November 2014, the PBAC recommended including an 18 month ‘booster’ dose of GSK Infanrix combination diphtheria, tetanus and acellular pertussis vaccine on the National Immunisation Program Schedule. November 2014 – Positive Recommendations. Recommendations made by the PBAC November 2014: <http://www.pbs.gov.au/info/industry/listing/elements/pbac-meetings/pbac-outcomes/2014-11>

¹³ The Sanofi-aventis TRIPACEL vaccine was approved for the NIP by the PBAC in 2015. July 2015 – Positive Recommendations. Recommendations made by the PBAC July 2015: <http://www.pbs.gov.au/info/industry/listing/elements/pbac-meetings/pbac-outcomes/pbac-outcomes-2015-07>

¹⁴ New whooping cough booster for 18 month old children. Immunise Australia Program, updated 23 February 2016: <http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/news-20162302>

¹⁵ Peter McIntyre states: “...although any death from pertussis is tragic, there are, on average, less than three identified each year and even factoring in hospitalisations from pertussis would not add up to many QALYs to gain (compared to, say, drugs to prevent heart attacks in adults)” in Does whooping cough vaccine for parents protect newborns (and who should pay for it)? The Conversation, 15 May 2012: <https://theconversation.com/does-whooping-cough-vaccine-for-parents-protect-newborns-and-who-should-pay-for-it-6980>

¹⁶ The Murdoch Media’s extraordinarily crude ‘No Jab, No Play’ campaign appears to have been driven by the death of baby Dana McCaffrey, who is reported to have died due to the effects of pertussis/whooping cough in 2009, and whose death appears to be blamed on those who do not vaccinate against pertussis/whooping cough, see for example [We never got the chance to protect our little girl](http://www.dailytelegraph.com.au/news/local/parents-who-refuse-to-vaccinate-their-children-see-grieving-dad-s-message-for-anti-immunisation-parents-after-whooping-cough-death/news.com,19March2015), The Daily Telegraph, 6 May 2013. The death of baby Riley Hughes in March 2015 has similarly been blamed on “parents who refuse to vaccinate their children”, see [Grieving dad’s message for anti-immunisation parents after whooping cough death](http://www.dailytelegraph.com.au/news/local/grieving-dad-s-message-for-anti-immunisation-parents-after-whooping-cough-death/news.com,19March2015), news.com, 19 March 2015. While the deaths of Dana McCaffrey and Riley Hughes are tragedies for their families, it is unclear how revaccinating the population over and over again with the defective acellular pertussis vaccine helps this matter.

¹⁷ See 4.12 Pertussis – 4.12.7 Recommendations in The Australian Immunisation Handbook, updated 20 April 2015: <http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/Handbook10-home~handbook10part4~handbook10-4-12> Also see Peter Bruce McIntyre. **Does whooping cough vaccine for parents protect newborns (and who should pay for it)?** The Conversation, 15 May 2014: <https://theconversation.com/does-whooping-cough-vaccine-for-parents-protect-newborns-and-who-should-pay-for-it-6980>

¹⁸ In March 2012, The Conversation reported on a new strain of whooping cough that appears to be resistant to vaccination i.e. “A team led by scientists at The University of New South Wales believes the emerging strain of the Bordetella pertussis bacterium may be evading the effects of the widely-prescribed acellular vaccine (ACV) and increasing the incidence of the potentially fatal respiratory illness, according to a study published in The Journal of Infectious Diseases”. See **Vaccine-resistant whooping cough takes epidemic to new level**: <https://theconversation.com/vaccine-resistant-whooping-cough-takes-epidemic-to-new-level-5959> In The Conversation article, Lyn Gilbert, a Professor in Medicine and Infectious Diseases at the University of Sydney, said there was a range of ways scientists might tackle the new strain of whooping cough, including administering “more boosters of the current vaccine”. The question is, **how does increasing the numbers of ‘boosters’ of the current vaccine protect against the new strain?** Also see my email enquiries on this matter to Lyn Gilbert and Ruiting Ian in December 2012: http://users.on.net/~peter.hart/W/whooping_cough_enquiry.pdf which did not receive a response. Also see Octavia, S. et al. **Newly Emerging Clones of Bordetella pertussis Carrying prn2 and ptxP3 Alleles Implicated in Australian Pertussis Epidemic in 2008-2010**. JID 2012:205 (15 April). Brief Report: <http://jid.oxfordjournals.org/content/early/2012/03/14/infdis.jis178.full.pdf+html> and **Sharp rise in cases of new strain of whooping cough**. UNSW Australia Newsroom, 21 March 2012: <https://newsroom.unsw.edu.au/news/health/sharp-rise-cases-new-strain-whooping-cough> Also see Safarchi A et al. **Pertactin negative Bordetella pertussis demonstrates higher fitness under vaccine selection pressure in a mixed infection model**. Vaccine. 2015 Oct 2. pii: S0264-410X(15)01340-7 (Epub ahead of print): <http://www.ncbi.nlm.nih.gov/pubmed/26432908> and Anna M Acosta et al. **Tdap Vaccine Effectiveness in Adolescents During the 2012 Washington State Pertussis Epidemic**. Pediatrics April 2015: http://pediatrics.aappublications.org/content/early/2015/04/28/peds.2014-3358?variant=abstract&sso=1&sso_redirect_count=1&nfststatus=401&nftoken=00000000-0000-0000-0000-000000000000&nfststatusdescription=ERROR%3a+No+local+token and Bart MJ et al. **Global population structure and evolution of Bordetella pertussis and their relationship with vaccination**. MBio. 2014 Apr 22;5(2): <http://www.ncbi.nlm.nih.gov/pubmed/24757216> and Octavia S et al. **Insight into evolution of Bordetella pertussis from comparative genomic analysis: evidence of vaccine-driven selection**. Mol Biol Evol. 2011 Jan;28(1):707-15. Epub 2010 Sep 10: <http://www.ncbi.nlm.nih.gov/pubmed/20833694> and Lam C et al. **Selection of emergence of pertussis toxin promoter ptxP3 allele in the evolution of Bordetella pertussis**. Infect Genet Evol. 2012 Mar;12(2):492-5. Epub 2012 Jan 24: <http://www.ncbi.nlm.nih.gov/pubmed/22293463>

¹⁹ See for example **FDA study helps provide an understanding of rising rates of whooping cough and response to vaccination**. FDA News Release, 27 November 2013: <http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm376937.htm> and Jason M Warfel et al. **Acellular pertussis vaccines protect against disease but fail to prevent infection and transmission in a nonhuman primate model**. PNAS, 22 October 2013: <http://www.pnas.org/content/111/2/787.full.pdf> Also see Martin SW et al **Pertactin-negative Bordetella pertussis strains: evidence for a possible selective advantage**. Clin Infect Dis. 2015 Jan 15;60(2):2223-7. Epub 2014 Oct 9: <http://www.ncbi.nlm.nih.gov/pubmed/25301209> and Stacey W Martin et al. **Pertactin-Negative Bordetella pertussis Strains: Evidence for a Possible Selective Advantage**. Clin Infect Dis. (2015) 60 (2): 223-227. First published online: October 9, 2014: <http://cid.oxfordjournals.org/content/60/2/223.long>

²⁰ See **Some Vaccines Support Evolution of More-Virulent Viruses**. PennState Science, 27 July 2015: <http://news.psu.edu/story/363898/2015/07/27/research/some-vaccines-support-evolution-more-virulent-viruses> and **Leaky vaccines promote the transmission of more virulent virus**. Center for Infectious Disease Dynamics. Penn State: <https://www.huck.psu.edu/content/research/center-for-infectious-disease-dynamics/research/synopses/leaky-vaccines-promote-the-transmission-of-more-virulent-virus> The study referred to in this articles is: Andrew F. Read et al. **Imperfect Vaccination Can Enhance the Transmission of Highly Virulent Pathogens**. PLOS Biology, July 27 2015: <http://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.1002198>