

1
00:00:00,000 --> 00:00:09,089
[Music]

2
00:00:05,929 --> 00:00:11,839
welcome to the skeptic zone the podcast

3
00:00:09,089 --> 00:00:13,919
from Australia for science and reason

4
00:00:11,839 --> 00:00:16,850
[Music]

5
00:00:13,919 --> 00:00:21,949
[Applause]

6
00:00:16,850 --> 00:00:24,540
[Music]

7
00:00:21,949 --> 00:00:28,019
hello and welcome to the skeptic zone

8
00:00:24,539 --> 00:00:31,469
episode number 437 for the fifth of

9
00:00:28,019 --> 00:00:35,009
March 2017 Richard Saunders here with

10
00:00:31,469 --> 00:00:36,960
you from rain-soaked Sydney Australia in

11
00:00:35,009 --> 00:00:39,179
fact we've had quite a lot of rainfall

12
00:00:36,960 --> 00:00:41,219
lately the Ducks are happy as my

13
00:00:39,179 --> 00:00:43,500
grandfather used to say it's good

14
00:00:41,219 --> 00:00:48,359
weather for ducks and speaking of things

15
00:00:43,500 --> 00:00:51,570
that go quack hmm news this week of our

16
00:00:48,359 --> 00:00:53,250
david wolfe david avocado Wolfe as he's

17
00:00:51,570 --> 00:00:55,799
known we're going to catch up with our

18
00:00:53,250 --> 00:00:57,689
friend and reporter Heidi Robertson the

19
00:00:55,799 --> 00:01:00,119
raw skeptic in the raw skeptic report

20
00:00:57,689 --> 00:01:02,939
who is going to fill us in on the latest

21
00:01:00,119 --> 00:01:05,939
information about his Australian tour

22
00:01:02,939 --> 00:01:08,340
and plus some news items from Jane

23
00:01:05,939 --> 00:01:10,920
Hansen who we often quote on the skeptic

24
00:01:08,340 --> 00:01:12,780
zone that's coming up at the top of the

25
00:01:10,920 --> 00:01:14,760
show after that we're going to be

26
00:01:12,780 --> 00:01:16,500
looking at the story as written at

27
00:01:14,760 --> 00:01:18,960
skeptics comdata you the Australian

28
00:01:16,500 --> 00:01:20,909
skeptics website about our friends in

29

00:01:18,959 --> 00:01:23,159
Victoria at the Victorian skeptics

30
00:01:20,909 --> 00:01:24,689
tumbling rumbling discovering some

31
00:01:23,159 --> 00:01:27,479
dangerous products or potentially

32
00:01:24,689 --> 00:01:32,609
dangerous products being sold in a

33
00:01:27,480 --> 00:01:36,570
Melbourne Hospital and homeopathy rears

34
00:01:32,609 --> 00:01:38,849
its ridiculous head once more also this

35
00:01:36,569 --> 00:01:42,509
week we have brouhaha from Australia

36
00:01:38,849 --> 00:01:46,379
science TV and it's kelly wang telling

37
00:01:42,510 --> 00:01:48,660
us about science and the Academy Awards

38
00:01:46,379 --> 00:01:50,519
the Oscars then to round off the show a

39
00:01:48,659 --> 00:01:54,479
special report with some scientists this

40
00:01:50,519 --> 00:01:56,670
is where the haha the theme of the show

41
00:01:54,480 --> 00:02:00,109
the skeptics own science and reason this

42
00:01:56,670 --> 00:02:02,430
is the science part restore and renew

43
00:02:00,109 --> 00:02:05,730

main odds going to be chatting to some

44

00:02:02,430 --> 00:02:08,000

scientists here in Sydney about gene

45

00:02:05,730 --> 00:02:11,509

technology when it comes to botany a

46

00:02:08,000 --> 00:02:15,769

really interesting series of interviews

47

00:02:11,509 --> 00:02:19,139

from Maynard gene technology and botany

48

00:02:15,769 --> 00:02:20,730

the genetics of plants and don't forget

49

00:02:19,139 --> 00:02:23,729

to check out Maynard's website at

50

00:02:20,729 --> 00:02:26,459

maynard com delay you for his podcasts

51

00:02:23,729 --> 00:02:28,738

and events now in the past couple of

52

00:02:26,459 --> 00:02:29,700

weeks I've started a new radio segment

53

00:02:28,739 --> 00:02:32,789

here in Australia

54

00:02:29,699 --> 00:02:34,259

just about skeptical issues and I'll add

55

00:02:32,789 --> 00:02:36,419

a link to that in the show notes if

56

00:02:34,259 --> 00:02:38,609

you're living in Australia yeah the

57

00:02:36,419 --> 00:02:40,049

segment goes out on weekends early

58
00:02:38,610 --> 00:02:41,940
morning I don't think that's a

59
00:02:40,050 --> 00:02:44,489
particular time it sort of slaughtered

60
00:02:41,939 --> 00:02:46,919
into the schedule with an old friend of

61
00:02:44,489 --> 00:02:49,140
mine Mike Williams man currently he's

62
00:02:46,919 --> 00:02:53,219
based here in Sydney working out of 2gb

63
00:02:49,139 --> 00:02:56,759
but the show is syndicated but if you go

64
00:02:53,219 --> 00:02:58,919
to the skeptic zone skeptics and TV the

65
00:02:56,759 --> 00:03:00,719
website there I will add a link in the

66
00:02:58,919 --> 00:03:03,839
show notes where you can listen to or

67
00:03:00,719 --> 00:03:05,729
download my radio segments the first

68
00:03:03,840 --> 00:03:09,319
week was about general skepticism and

69
00:03:05,729 --> 00:03:11,909
the one that's just gone out is about

70
00:03:09,318 --> 00:03:14,009
predicting the future can psychics

71
00:03:11,909 --> 00:03:17,879
predict the future longtime skeptic zone

72
00:03:14,009 --> 00:03:20,269
listeners will know that about once a

73
00:03:17,879 --> 00:03:23,989
year we mark the homework of Australia's

74
00:03:20,269 --> 00:03:27,000
greatest psychics and seers and see how

75
00:03:23,989 --> 00:03:29,159
their prediction stack up to reality a

76
00:03:27,000 --> 00:03:31,729
new project I'm undertaking with the

77
00:03:29,159 --> 00:03:35,120
Australian skeptics at the moment we're

78
00:03:31,729 --> 00:03:38,399
marking were colliding we have collated

79
00:03:35,120 --> 00:03:40,560
400 predictions over 12 years made by

80
00:03:38,400 --> 00:03:42,920
Australian psychics and we're going

81
00:03:40,560 --> 00:03:46,769
through to do a comprehensive

82
00:03:42,919 --> 00:03:49,409
investigation into their accuracy more

83
00:03:46,769 --> 00:03:51,569
news on that as there as we progress and

84
00:03:49,409 --> 00:03:54,120
if you're in the sydney area you might

85
00:03:51,568 --> 00:03:56,488
want to check out stranger things down

86

00:03:54,120 --> 00:03:59,609
under it's a Facebook group just go to

87
00:03:56,489 --> 00:04:04,170
facebook.com slash stranger things down

88
00:03:59,609 --> 00:04:07,620
under one word and I notice they have an

89
00:04:04,169 --> 00:04:11,298
event coming up on the first of April

90
00:04:07,620 --> 00:04:14,819
where they're off to spend a day with

91
00:04:11,299 --> 00:04:17,608
some UFO believers this will be the

92
00:04:14,818 --> 00:04:20,939
right Eastwood's leagues club and it

93
00:04:17,608 --> 00:04:22,769
goes from 1pm to 5pm so it should be a

94
00:04:20,939 --> 00:04:24,660
quite an interesting afternoon if you're

95
00:04:22,769 --> 00:04:26,759
interested in joining the stranger

96
00:04:24,660 --> 00:04:29,039
things down under group going along to

97
00:04:26,759 --> 00:04:31,759
these things then head for the website

98
00:04:29,038 --> 00:04:34,918
at facebook link in the show notes and

99
00:04:31,759 --> 00:04:37,829
finally if you head for the Facebook

100
00:04:34,918 --> 00:04:41,389

side of the skeptic zone link on the

101

00:04:37,829 --> 00:04:42,769
show notes I have put their a

102

00:04:41,389 --> 00:04:47,810
high-resolution down

103

00:04:42,769 --> 00:04:49,939
loadable printable picture of the P the

104

00:04:47,810 --> 00:04:53,240
flying pig i created for james randi the

105

00:04:49,939 --> 00:04:56,598
origami flying pig Pegasus and it's made

106

00:04:53,240 --> 00:05:00,579
out of a Mongolian banknote if you code

107

00:04:56,598 --> 00:05:03,560
here click the link download the I

108

00:05:00,579 --> 00:05:06,079
reserved photograph of Pegasus and if

109

00:05:03,560 --> 00:05:08,839
you want to whack it on the wall if you

110

00:05:06,079 --> 00:05:12,589
do that by the way why don't you post a

111

00:05:08,839 --> 00:05:14,329
picture of figgis's institute on our

112

00:05:12,589 --> 00:05:16,369
facebook page arm that would be

113

00:05:14,329 --> 00:05:19,399
fantastic that's enough for me at the

114

00:05:16,370 --> 00:05:22,449
moment I'm going to run downstairs go

115
00:05:19,399 --> 00:05:25,989
into the cupboard above the fridge

116
00:05:22,449 --> 00:05:30,560
behind the soda water get out some

117
00:05:25,990 --> 00:05:33,288
popcorn microwave popcorn pop some

118
00:05:30,560 --> 00:05:35,389
popcorn I think we all need a lot of pop

119
00:05:33,288 --> 00:05:37,848
on lately with the world events what's

120
00:05:35,389 --> 00:05:41,590
going on well I munch that popcorn I

121
00:05:37,848 --> 00:05:41,589
hope you enjoy the skeptic zone

122
00:05:56,899 --> 00:06:04,439
as published in The Daily Telegraph on

123
00:06:00,120 --> 00:06:07,199
februari the 26th by Jane Hansen david

124
00:06:04,439 --> 00:06:11,420
wolfe flat earther brings anti-vaxxers

125
00:06:07,199 --> 00:06:14,159
to australia renowned international

126
00:06:11,420 --> 00:06:19,290
wellness guru and anti-vaccination

127
00:06:14,160 --> 00:06:21,210
proponent david avocado Wolfe has raised

128
00:06:19,290 --> 00:06:23,850
the hackles of health experts and

129
00:06:21,209 --> 00:06:26,699
parents in the Byron Shire regarding his

130
00:06:23,850 --> 00:06:29,879
upcoming visit on March the 16th in

131
00:06:26,699 --> 00:06:32,789
byron bay critics say the event which

132
00:06:29,879 --> 00:06:34,740
promises wolf will give quote Byron Bay

133
00:06:32,790 --> 00:06:37,560
the latest download on how the world

134
00:06:34,740 --> 00:06:39,509
really works and quote will provide a

135
00:06:37,560 --> 00:06:42,689
platform to mislead parents on the issue

136
00:06:39,509 --> 00:06:45,089
of vaccination the shire is renowned for

137
00:06:42,689 --> 00:06:47,430
the lowest vaccination rates in the

138
00:06:45,089 --> 00:06:50,369
country only forty-six percent of

139
00:06:47,430 --> 00:06:52,530
five-year-olds in mulund mimbi and 61

140
00:06:50,370 --> 00:06:54,360
percent of Byron Bay children are fully

141
00:06:52,529 --> 00:06:57,269
vaccinated compared to the national

142
00:06:54,360 --> 00:06:59,819
average of ninety-two percent Alison

143

00:06:57,269 --> 00:07:02,009
Gaylord co-founder of the Northern

144
00:06:59,819 --> 00:07:04,889
Rivers vaccination supporters group

145
00:07:02,009 --> 00:07:07,259
based in mulund mimbi said the area was

146
00:07:04,889 --> 00:07:09,449
a magnet for conspiracy theories and

147
00:07:07,259 --> 00:07:12,719
anti-vaccination advocates who are

148
00:07:09,449 --> 00:07:15,420
embraced by a community that prides

149
00:07:12,720 --> 00:07:18,810
itself on being alternative if not

150
00:07:15,420 --> 00:07:21,840
misinformed quote he is a well-known and

151
00:07:18,810 --> 00:07:24,569
evac sir and among his inspirational

152
00:07:21,839 --> 00:07:26,639
memes thousands share on Facebook he

153
00:07:24,569 --> 00:07:29,279
also posts miss information about

154
00:07:26,639 --> 00:07:32,370
vaccination and people like wolford

155
00:07:29,279 --> 00:07:35,399
drawn to this area for that reason they

156
00:07:32,370 --> 00:07:38,879
find the echo chamber they need in quote

157
00:07:35,399 --> 00:07:41,609

ms Gaylord said two babies including

158

00:07:38,879 --> 00:07:45,329

Dana McCaffrey lost their lives to

159

00:07:41,610 --> 00:07:48,180

whooping cough during the 2009 2012

160

00:07:45,329 --> 00:07:51,149

epidemic in the region which researchers

161

00:07:48,180 --> 00:07:54,449

pinpointed as the epicenter due to the

162

00:07:51,149 --> 00:07:57,649

low vaccination rates in the area David

163

00:07:54,449 --> 00:08:00,589

Wolfe who refers to himself as quote the

164

00:07:57,649 --> 00:08:03,589

rockstar and Indiana Jones of superfoods

165

00:08:00,589 --> 00:08:06,888

and longevity universe in quote and

166

00:08:03,589 --> 00:08:10,038

boasts quote the world's top CEOs

167

00:08:06,889 --> 00:08:12,800

ambassadors celebrities athletes artists

168

00:08:10,038 --> 00:08:15,860

and real superheroes of the planet mums

169

00:08:12,800 --> 00:08:18,740

all took to David for expert advice in

170

00:08:15,860 --> 00:08:22,038

health beauty herbalism and chocolate

171

00:08:18,740 --> 00:08:24,228

end quote he incorrectly states on his

172
00:08:22,038 --> 00:08:26,418
website that a quote growing body of

173
00:08:24,228 --> 00:08:28,550
evidence indicates that vaccines are not

174
00:08:26,418 --> 00:08:30,620
safe and that they can injure

175
00:08:28,550 --> 00:08:33,349
permanently maim or even kill you or a

176
00:08:30,620 --> 00:08:35,750
family member in quote there is no such

177
00:08:33,349 --> 00:08:37,640
body of evidence ms gala and the

178
00:08:35,750 --> 00:08:40,549
Northern Rivers of vaccination

179
00:08:37,639 --> 00:08:43,098
supporters has sent an open letter to

180
00:08:40,549 --> 00:08:46,519
the host of the upcoming seminar Jing

181
00:08:43,099 --> 00:08:50,180
organics requesting they not provide a

182
00:08:46,519 --> 00:08:52,458
venue for Miss information quote hosting

183
00:08:50,179 --> 00:08:54,979
anti-vaccination activists in this area

184
00:08:52,458 --> 00:08:57,500
does nothing to help accurately inform

185
00:08:54,980 --> 00:09:00,050
the community about vaccines but it does

186
00:08:57,500 --> 00:09:02,269
place them at risk by exposing them to

187
00:09:00,049 --> 00:09:04,490
falsehoods that could easily lead them

188
00:09:02,269 --> 00:09:07,309
to stop vaccinating themselves and their

189
00:09:04,490 --> 00:09:10,519
children we see this as a public health

190
00:09:07,309 --> 00:09:13,009
issue and ask you to support us in our

191
00:09:10,519 --> 00:09:16,159
efforts to prevent the spread of Miss

192
00:09:13,009 --> 00:09:18,830
information like that which mr. wolf has

193
00:09:16,159 --> 00:09:21,379
spoken about in the past and quote the

194
00:09:18,830 --> 00:09:24,920
letter reads local pediatrician dr.

195
00:09:21,379 --> 00:09:27,588
Chris Engel said hosting such people

196
00:09:24,919 --> 00:09:31,159
just creates further confusion and

197
00:09:27,589 --> 00:09:33,410
misleads people quote we see a high

198
00:09:31,159 --> 00:09:36,588
prevalence of vaccine preventable

199
00:09:33,409 --> 00:09:39,289
illnesses here that takes a real toll on

200

00:09:36,589 --> 00:09:42,170
children and parents these people like

201
00:09:39,289 --> 00:09:45,379
wolf land up here with all the

202
00:09:42,169 --> 00:09:47,809
ill-informed views which may change the

203
00:09:45,379 --> 00:09:50,120
minds of some people and that can have a

204
00:09:47,809 --> 00:09:53,059
ripple effect which puts families at

205
00:09:50,120 --> 00:09:56,179
risk and quote dr. Engel said on

206
00:09:53,059 --> 00:09:58,879
Thursday Sydney vitamin company mr.

207
00:09:56,179 --> 00:10:00,979
vitamins cancelled a sponsored david

208
00:09:58,879 --> 00:10:03,350
wolfe appearance in chatswood after a

209
00:10:00,980 --> 00:10:06,350
social media backlash against the

210
00:10:03,350 --> 00:10:08,959
company owner of Jing organics David

211
00:10:06,350 --> 00:10:10,759
Kingsley said he did not care about the

212
00:10:08,958 --> 00:10:12,339
concerns of people and how

213
00:10:10,759 --> 00:10:15,139
david wolfe would spread the

214
00:10:12,340 --> 00:10:17,570

anti-vaccine message quote I'm

215

00:10:15,139 --> 00:10:19,580

anti-vaccine and publicly open about it

216

00:10:17,570 --> 00:10:22,460

just because stuff is peer-reviewed

217

00:10:19,580 --> 00:10:25,580

doesn't mean it's true David Wolfe is a

218

00:10:22,460 --> 00:10:28,850

world health expert in quote mr.

219

00:10:25,580 --> 00:10:31,100

Kingsley said David Wolfe calls himself

220

00:10:28,850 --> 00:10:35,930

a nutritionist believes that the world

221

00:10:31,100 --> 00:10:38,090

is flat and claims gravity is a hoax mr.

222

00:10:35,929 --> 00:10:41,449

Kingsley claimed vaccines cause autism

223

00:10:38,090 --> 00:10:43,790

because he is in the health industry he

224

00:10:41,450 --> 00:10:46,070

makes sauerkraut and fermented foods and

225

00:10:43,789 --> 00:10:49,399

sells organic products and he speaks to

226

00:10:46,070 --> 00:10:51,440

mothers whose children have autism there

227

00:10:49,399 --> 00:10:53,750

are over a hundred international studies

228

00:10:51,440 --> 00:10:56,510

that have debunked the link first put

229
00:10:53,750 --> 00:10:58,820
forward by struck-off dr. andrew

230
00:10:56,509 --> 00:11:02,090
wakefield and that story comes to us

231
00:10:58,820 --> 00:11:04,730
from jane hansen published at the Daily

232
00:11:02,090 --> 00:11:15,110
Telegraph Daily Telegraph comdata you on

233
00:11:04,730 --> 00:11:25,519
the 26 of february it's the raw skeptic

234
00:11:15,110 --> 00:11:27,320
report with Heidi Robertson and joining

235
00:11:25,519 --> 00:11:29,059
me now on the line all the way from the

236
00:11:27,320 --> 00:11:31,340
north coast of New South Wales the far

237
00:11:29,059 --> 00:11:34,939
north coast it's the raw skeptic herself

238
00:11:31,340 --> 00:11:37,070
Heidi Robertson hello Heidi hello hello

239
00:11:34,940 --> 00:11:40,580
I'm well and so good to catch up with

240
00:11:37,070 --> 00:11:44,450
you we don't actually chat often do we I

241
00:11:40,580 --> 00:11:46,340
know it's usually usually by a text

242
00:11:44,450 --> 00:11:48,860
message about something skeptical that's

243
00:11:46,340 --> 00:11:50,750
going on yeah it really is and i must

244
00:11:48,860 --> 00:11:53,210
say thank you for your reports over the

245
00:11:50,750 --> 00:11:54,409
last couple of years the raw skeptic

246
00:11:53,210 --> 00:11:57,350
report is certainly one of the

247
00:11:54,409 --> 00:11:59,719
highlights of of the skeptic zone well

248
00:11:57,350 --> 00:12:01,970
i'm looking forward to doing more soon

249
00:11:59,720 --> 00:12:04,370
it's been a little bit hectic lately oh

250
00:12:01,970 --> 00:12:07,540
yes well life gets in the way sometime

251
00:12:04,370 --> 00:12:12,409
now we just heard about this guy this

252
00:12:07,539 --> 00:12:14,240
david wolfe avocado Wolfe who is heading

253
00:12:12,409 --> 00:12:16,250
your way up to your neck of the woods

254
00:12:14,240 --> 00:12:19,039
and I think you were partly responsible

255
00:12:16,250 --> 00:12:22,100
for an open letter about about this what

256
00:12:19,039 --> 00:12:26,899
can you tell me about that yeah so David

257

00:12:22,100 --> 00:12:29,769
avocado is coming to Australia for an

258
00:12:26,899 --> 00:12:32,600
Australian tour of most skeptical

259
00:12:29,769 --> 00:12:36,649
listeners would probably have heard of

260
00:12:32,600 --> 00:12:39,409
him before he speaks on a range of

261
00:12:36,649 --> 00:12:41,809
issues and we're not really concerned

262
00:12:39,409 --> 00:12:45,259
with any of any of the stuff that he

263
00:12:41,809 --> 00:12:48,319
talks about apart from his views on

264
00:12:45,259 --> 00:12:52,669
vaccination which which are misinformed

265
00:12:48,320 --> 00:12:54,830
and to do with vaccinations so we're not

266
00:12:52,669 --> 00:12:58,429
that happy that he might be coming to

267
00:12:54,830 --> 00:13:02,450
this region where as everyone knows our

268
00:12:58,429 --> 00:13:05,239
vaccination rates are abysmal enough as

269
00:13:02,450 --> 00:13:08,060
it is and we're concerned that if he

270
00:13:05,240 --> 00:13:10,519
does get a platform by a venue hosting

271
00:13:08,059 --> 00:13:14,479

him in this region that he will sway

272

00:13:10,519 --> 00:13:17,779

even more people who might be hesitant

273

00:13:14,480 --> 00:13:19,670

and and not really sure what they think

274

00:13:17,779 --> 00:13:21,769

on the whole vaccination topic you might

275

00:13:19,669 --> 00:13:23,449

you might scare them into not

276

00:13:21,769 --> 00:13:27,049

vaccinating so that's the last thing we

277

00:13:23,450 --> 00:13:30,230

need in this region I mean Byron Bay

278

00:13:27,049 --> 00:13:32,269

where where he's going to be speaking

279

00:13:30,230 --> 00:13:35,200

just up the road at the gold coast where

280

00:13:32,269 --> 00:13:38,779

he'll be appearing the following night

281

00:13:35,200 --> 00:13:41,480

these are hot spots for tourism as well

282

00:13:38,779 --> 00:13:44,419

like having Byron Bay alone gets I think

283

00:13:41,480 --> 00:13:48,080

2 million visitors every year oh sure

284

00:13:44,419 --> 00:13:51,379

yeah it's a very popular place as is the

285

00:13:48,080 --> 00:13:55,129

gold coast for overseas visitors and I

286
00:13:51,379 --> 00:13:57,429
overseas visitors that might come from

287
00:13:55,129 --> 00:13:59,960
countries where measles and

288
00:13:57,429 --> 00:14:03,109
whooping-cough and diphtheria and all

289
00:13:59,960 --> 00:14:05,120
these things might still be endemic they

290
00:14:03,110 --> 00:14:09,019
bring them over here unknowingly and

291
00:14:05,120 --> 00:14:10,850
then staying in regions with low

292
00:14:09,019 --> 00:14:13,069
vaccination uptake like the northern

293
00:14:10,850 --> 00:14:16,279
rivers and gold coast as well as low

294
00:14:13,070 --> 00:14:20,480
vaccination rates it's just asking for

295
00:14:16,279 --> 00:14:24,110
an outbreak to occur so the efforts that

296
00:14:20,480 --> 00:14:26,539
we're trying to to put into increasing

297
00:14:24,110 --> 00:14:28,669
vaccination uptake here I'm not going to

298
00:14:26,539 --> 00:14:32,209
be helped by having someone like mr.

299
00:14:28,669 --> 00:14:35,750
Wolfe speaking and perhaps on

300
00:14:32,210 --> 00:14:38,180
vaccination what do you think is behind

301
00:14:35,750 --> 00:14:40,399
his popularity among certain circles is

302
00:14:38,179 --> 00:14:42,589
it because he just comes out without

303
00:14:40,399 --> 00:14:44,529
rageous conspiracy theories or is it

304
00:14:42,590 --> 00:14:48,649
because people see him as some sort of

305
00:14:44,529 --> 00:14:51,169
crusader for the truth I'm not sure I

306
00:14:48,649 --> 00:14:54,289
mean I'm not a follower myself of him on

307
00:14:51,169 --> 00:14:58,899
facebook so i don't know but from what

308
00:14:54,289 --> 00:15:02,269
i've heard he and i know that other

309
00:14:58,899 --> 00:15:04,639
successful sites do this as well they

310
00:15:02,269 --> 00:15:07,730
post there's really nice and

311
00:15:04,639 --> 00:15:10,610
inspirational memes and there's nothing

312
00:15:07,730 --> 00:15:12,200
we wish or anything about them they're

313
00:15:10,610 --> 00:15:13,550
quite reasonable and they're nice and

314

00:15:12,200 --> 00:15:17,540
they make you feel all warm and fluffy

315
00:15:13,549 --> 00:15:19,490
inside but okay and you know speaking to

316
00:15:17,539 --> 00:15:23,240
a lot of people who do follow him a lot

317
00:15:19,490 --> 00:15:25,700
of them don't know about his more wacky

318
00:15:23,240 --> 00:15:27,649
beliefs like chocolate being an octave

319
00:15:25,700 --> 00:15:29,590
of the Sun and gravity being a hoax and

320
00:15:27,649 --> 00:15:32,840
mushrooms being from outer space and

321
00:15:29,590 --> 00:15:36,170
people don't know about those beliefs

322
00:15:32,840 --> 00:15:38,690
that he had he has they they they like

323
00:15:36,169 --> 00:15:42,409
him on Facebook because of the warm and

324
00:15:38,690 --> 00:15:43,930
fluffy inspirational memes hmm I wish

325
00:15:42,409 --> 00:15:48,699
gravity was a hoax

326
00:15:43,929 --> 00:15:50,979
I wish wouldn't that be fun but you are

327
00:15:48,700 --> 00:15:54,970
you wrote an open letter about about

328
00:15:50,980 --> 00:15:58,089

this character huh yeah yes so we wrote

329

00:15:54,970 --> 00:16:00,430

an open letter on our Northern Rivers

330

00:15:58,089 --> 00:16:04,180

vaccination supporters Facebook page and

331

00:16:00,429 --> 00:16:08,620

we addressed it to Jing organics which

332

00:16:04,179 --> 00:16:12,899

is the the venue that has agreed to host

333

00:16:08,620 --> 00:16:16,810

him in byron bay also to the local

334

00:16:12,899 --> 00:16:21,028

newspaper the Northern Star and we also

335

00:16:16,809 --> 00:16:24,489

addressed it to ABC north coast so

336

00:16:21,028 --> 00:16:27,909

within about three minutes of me posting

337

00:16:24,490 --> 00:16:29,980

it up on our site and journalists from

338

00:16:27,909 --> 00:16:36,039

the Northern Star gone into contact with

339

00:16:29,980 --> 00:16:38,800

us and published a piece on it and our

340

00:16:36,039 --> 00:16:41,500

friend Jane hats and also got in touch

341

00:16:38,799 --> 00:16:44,469

and did a piece on it for The Sunday

342

00:16:41,500 --> 00:16:47,589

Telegraph which came out yesterday in

343
00:16:44,470 --> 00:16:50,800
preet and much more comprehensive paste

344
00:16:47,589 --> 00:16:53,740
online well Heidi for the benefit of our

345
00:16:50,799 --> 00:17:00,909
listeners let's have you now read out

346
00:16:53,740 --> 00:17:04,058
that open letter an open letter to Jing

347
00:17:00,909 --> 00:17:07,029
organics ABC north coast and the

348
00:17:04,058 --> 00:17:10,389
Northern Star to also be posted on their

349
00:17:07,029 --> 00:17:12,250
respective Facebook pages we wish to

350
00:17:10,390 --> 00:17:15,280
bring your attention to the upcoming

351
00:17:12,250 --> 00:17:18,578
talk that David avocado Wolfe has been

352
00:17:15,279 --> 00:17:20,740
booked for in byron bay we have concerns

353
00:17:18,578 --> 00:17:22,959
that in this region of already

354
00:17:20,740 --> 00:17:26,588
dangerously low vaccination rates a

355
00:17:22,959 --> 00:17:28,328
known anti-vaccination activist will be

356
00:17:26,588 --> 00:17:30,490
given a platform to spread his

357
00:17:28,328 --> 00:17:33,879
misinformation surrounding the safety

358
00:17:30,490 --> 00:17:35,620
and efficacy of vaccination as you're

359
00:17:33,880 --> 00:17:37,960
aware the northern rivers and in

360
00:17:35,619 --> 00:17:40,619
particular byron bay is visited by

361
00:17:37,960 --> 00:17:43,329
almost two million tourists annually

362
00:17:40,619 --> 00:17:45,159
this puts the region at an increased

363
00:17:43,329 --> 00:17:46,539
risk of travelers coming in from

364
00:17:45,160 --> 00:17:49,360
countries where vaccine-preventable

365
00:17:46,539 --> 00:17:52,450
diseases like measles and diphtheria are

366
00:17:49,359 --> 00:17:55,000
endemic if a traveler comes in already

367
00:17:52,450 --> 00:17:56,549
infected and stays in an area of low

368
00:17:55,000 --> 00:17:58,740
vaccination update

369
00:17:56,549 --> 00:18:01,139
it is placing the whole community at

370
00:17:58,740 --> 00:18:03,480
risk of an outbreak at the Northern

371

00:18:01,140 --> 00:18:05,160
Rivers vaccination supporters we are

372
00:18:03,480 --> 00:18:06,630
committed to providing the community

373
00:18:05,160 --> 00:18:08,880
with accurate information about

374
00:18:06,630 --> 00:18:11,760
vaccination and correcting

375
00:18:08,880 --> 00:18:13,800
misinformation where we see it in fact

376
00:18:11,759 --> 00:18:15,349
we have recently been endorsed in this

377
00:18:13,799 --> 00:18:17,849
capacity by the World Health

378
00:18:15,349 --> 00:18:19,439
Organization and now appear on their

379
00:18:17,849 --> 00:18:21,179
website as a trusted source of

380
00:18:19,440 --> 00:18:25,110
information on the safety and efficacy

381
00:18:21,180 --> 00:18:27,450
of vaccination hosting anti-vaccination

382
00:18:25,109 --> 00:18:29,069
activists in this area does nothing to

383
00:18:27,450 --> 00:18:32,220
help accurately inform the community

384
00:18:29,069 --> 00:18:34,740
about vaccines but it does place them at

385
00:18:32,220 --> 00:18:36,390

risk by exposing them to falsehoods that

386

00:18:34,740 --> 00:18:38,160
could easily lead them to stop

387

00:18:36,390 --> 00:18:41,130
vaccinating themselves and their

388

00:18:38,160 --> 00:18:43,529
children we see this as a public health

389

00:18:41,130 --> 00:18:44,970
issue and ask that you support us in our

390

00:18:43,529 --> 00:18:47,730
efforts to prevent the spread of

391

00:18:44,970 --> 00:18:50,940
misinformation like that which mr. Wolfe

392

00:18:47,730 --> 00:18:53,279
has spoken about in the past we would

393

00:18:50,940 --> 00:18:56,070
like the venue booked and indeed any

394

00:18:53,279 --> 00:18:57,750
other potential venues to reconsider

395

00:18:56,069 --> 00:19:01,950
hosting mr. Wolfe with his

396

00:18:57,750 --> 00:19:03,960
conspiratorial dangerous ideas we will

397

00:19:01,950 --> 00:19:07,170
be accused of trying to suppress free

398

00:19:03,960 --> 00:19:09,509
speech however mr. Wolfe's free speech

399

00:19:07,170 --> 00:19:11,490
is hardly being suppressed when he still

400
00:19:09,509 --> 00:19:13,710
has plenty of other outlets on which to

401
00:19:11,490 --> 00:19:15,900
publish his opinions such as his

402
00:19:13,710 --> 00:19:18,870
facebook page which has over 10 million

403
00:19:15,900 --> 00:19:20,610
followers we believe that as a community

404
00:19:18,869 --> 00:19:22,469
group we have the right to ask that

405
00:19:20,609 --> 00:19:24,389
venues in our region do not further

406
00:19:22,470 --> 00:19:27,059
assist him by providing him with a

407
00:19:24,390 --> 00:19:29,780
platform here directly at odds with what

408
00:19:27,059 --> 00:19:32,879
we have been working so hard to achieve

409
00:19:29,779 --> 00:19:37,759
sincerely Northern Rivers vaccination

410
00:19:32,880 --> 00:19:37,760
supporters hashtag don't cry wolf

411
00:19:40,970 --> 00:19:46,230
so Heidi what do you think listeners at

412
00:19:44,160 --> 00:19:49,650
the skeptic zone especially the ones in

413
00:19:46,230 --> 00:19:53,160
your area could do about this uh I think

414
00:19:49,650 --> 00:19:55,830
just well first of all it doesn't hurt

415
00:19:53,160 --> 00:19:58,200
to get in touch with their new owners I

416
00:19:55,829 --> 00:20:00,779
mean we know in the past that when venue

417
00:19:58,200 --> 00:20:03,480
owners have been made aware of the

418
00:20:00,779 --> 00:20:06,809
nature of some of these talks they've

419
00:20:03,480 --> 00:20:10,559
decided to to not to not host the

420
00:20:06,809 --> 00:20:15,119
speaker however having said that in this

421
00:20:10,559 --> 00:20:17,819
case the speaker that the venue host has

422
00:20:15,119 --> 00:20:20,669
been contacted and is pretty unrepentant

423
00:20:17,819 --> 00:20:23,039
in fact he's a staunch anti-vaccination

424
00:20:20,670 --> 00:20:24,690
advocate himself so mm-hmm that's

425
00:20:23,039 --> 00:20:28,710
probably not going to work in this case

426
00:20:24,690 --> 00:20:32,190
and I would just encourage two people to

427
00:20:28,710 --> 00:20:39,000
tell their friends and family about mr.

428

00:20:32,190 --> 00:20:41,190
avocados belief and and and have how the

429
00:20:39,000 --> 00:20:43,829
message the anti-vaccination message

430
00:20:41,190 --> 00:20:46,710
that he spreads is is dangerous and and

431
00:20:43,829 --> 00:20:50,699
not helpful and to maybe think twice

432
00:20:46,710 --> 00:20:52,799
about um about sharing his his posts on

433
00:20:50,700 --> 00:20:56,160
Facebook there's actually a hashtag as

434
00:20:52,799 --> 00:20:59,190
well call the hashtag don't cry wolf on

435
00:20:56,160 --> 00:21:03,840
on so this you know there's a whole

436
00:20:59,190 --> 00:21:07,019
trending hashtag that people can follow

437
00:21:03,839 --> 00:21:09,599
as well well Heidi thank you again for

438
00:21:07,019 --> 00:21:11,579
your efforts this wolf character seems

439
00:21:09,599 --> 00:21:12,959
to be quite a character indeed with some

440
00:21:11,579 --> 00:21:16,199
of these bizarre beliefs but yes

441
00:21:12,960 --> 00:21:18,079
ultimately if the convinces parents of

442
00:21:16,200 --> 00:21:22,350

some of the nonsense it could lead to

443

00:21:18,079 --> 00:21:24,689

two very undesirable consequences but

444

00:21:22,349 --> 00:21:27,629

I'm glad you're there and my kind

445

00:21:24,690 --> 00:21:28,590

regards to Alison too and all the crew

446

00:21:27,630 --> 00:21:31,380

there at the northern rivers

447

00:21:28,589 --> 00:21:33,929

vaccinations supporters who continue to

448

00:21:31,380 --> 00:21:37,590

do a marvelous job after all these years

449

00:21:33,930 --> 00:21:41,400

huh the years are starting to go by yes

450

00:21:37,589 --> 00:21:44,849

okay well we very much appreciate all

451

00:21:41,400 --> 00:21:46,860

the support that you and members give us

452

00:21:44,849 --> 00:21:48,959

couldn't do it without you okay Heidi

453

00:21:46,859 --> 00:21:51,959

for now goodbye but we'll keep our

454

00:21:48,960 --> 00:21:54,319

listeners up to date on this issue okay

455

00:21:51,960 --> 00:21:54,319

bye-bye

456

00:21:55,028 --> 00:22:01,038

hold the phone hold the press hold your

457
00:21:58,009 --> 00:22:04,308
horses some late-breaking news on this

458
00:22:01,038 --> 00:22:07,788
story once again from Jane Hansen who

459
00:22:04,308 --> 00:22:11,389
writes in The Sunday Telegraph and for

460
00:22:07,788 --> 00:22:14,808
anti vax wolf by Jane Hansen Sydney's

461
00:22:11,390 --> 00:22:17,690
International Convention Center ICC has

462
00:22:14,808 --> 00:22:20,690
ignored community outrage and refused to

463
00:22:17,690 --> 00:22:24,740
cancel an event with anti-vaccination

464
00:22:20,690 --> 00:22:28,159
spooker david avocado Wolfe however

465
00:22:24,740 --> 00:22:31,038
wolf's quote raw cacao dance party and

466
00:22:28,159 --> 00:22:33,620
quote at marrickville Town Hall last

467
00:22:31,038 --> 00:22:36,528
night was canceled by the inner west

468
00:22:33,619 --> 00:22:40,129
council now after it was contacted by

469
00:22:36,528 --> 00:22:42,470
The Sunday Telegraph quote council

470
00:22:40,130 --> 00:22:44,570
decided to cancel the event after

471
00:22:42,470 --> 00:22:47,929
numerous complaints and quote administer

472
00:22:44,569 --> 00:22:50,689
Richard Pearson said code it is clear

473
00:22:47,929 --> 00:22:52,700
our community feels extremely strongly

474
00:22:50,690 --> 00:22:55,640
about mr. wolf and his highly

475
00:22:52,700 --> 00:22:58,610
unconventional views particularly around

476
00:22:55,640 --> 00:23:01,850
the issue of vaccinations they have made

477
00:22:58,609 --> 00:23:04,849
it clear they feel hosting mr. wolf in a

478
00:23:01,849 --> 00:23:07,250
council-owned venue is a validation and

479
00:23:04,849 --> 00:23:09,889
endorsement of his anti immunization

480
00:23:07,250 --> 00:23:13,308
stance and quote mr. Pearson said but

481
00:23:09,890 --> 00:23:16,429
the ICC is happy to host its four

482
00:23:13,308 --> 00:23:18,950
hundred and forty dollar ahead seminar

483
00:23:16,429 --> 00:23:22,070
with wolf who believes gravity stock

484
00:23:18,950 --> 00:23:25,788
cick the earth is flat and vaccines

485

00:23:22,069 --> 00:23:27,849
cause cancer many of the sponsors are

486
00:23:25,788 --> 00:23:30,919
alternative health advocates with

487
00:23:27,849 --> 00:23:34,129
anti-vaccination views main sponsor

488
00:23:30,919 --> 00:23:36,200
super feast is owned by Mason Taylor who

489
00:23:34,130 --> 00:23:40,250
has publicly criticised campaigns like

490
00:23:36,200 --> 00:23:43,730
no jab no play and suggests a mushroom

491
00:23:40,250 --> 00:23:45,980
strain called Rishi has been shown to be

492
00:23:43,730 --> 00:23:49,130
just as effective quote there should be

493
00:23:45,980 --> 00:23:52,899
a no Rishi no play campaign end quote he

494
00:23:49,130 --> 00:23:55,940
said another sponsor one group is run by

495
00:23:52,898 --> 00:23:58,339
anti-vaccine activist Norrell Chenery

496
00:23:55,940 --> 00:24:01,220
who was president of the vaccine

497
00:23:58,339 --> 00:24:02,928
information service she has given our

498
00:24:01,220 --> 00:24:05,670
advice online that children with

499
00:24:02,929 --> 00:24:09,810

whooping cough should be treated with

500

00:24:05,670 --> 00:24:12,210

herbal tea and Rescue Remedy opposition

501

00:24:09,809 --> 00:24:15,149

health spokesman Walt Secord said wolf

502

00:24:12,210 --> 00:24:17,730

had quote a vicious opposition to

503

00:24:15,150 --> 00:24:19,530

life-saving vaccinations end quote and

504

00:24:17,730 --> 00:24:21,740

his claim that they were linked to

505

00:24:19,529 --> 00:24:25,619

autism and cancer was a ridiculous

506

00:24:21,740 --> 00:24:30,150

Samantha glass spokeswoman for icc said

507

00:24:25,619 --> 00:24:32,309

health activism events quote assured icc

508

00:24:30,150 --> 00:24:35,250

sydney that the content of this

509

00:24:32,309 --> 00:24:37,440

weekend's event is specific to nutrition

510

00:24:35,250 --> 00:24:40,170

and healthy foods they have confirmed

511

00:24:37,440 --> 00:24:42,870

that david wolfe is not there to and is

512

00:24:40,170 --> 00:24:45,690

never going to discuss the topic of

513

00:24:42,869 --> 00:24:48,179

vaccination the venue manager recognizes

514
00:24:45,690 --> 00:24:50,910
the diverse views and beliefs of the

515
00:24:48,180 --> 00:24:53,160
community in which it operates however

516
00:24:50,910 --> 00:24:55,800
it is not its role to determine which of

517
00:24:53,160 --> 00:24:59,730
those views can or cannot be represented

518
00:24:55,799 --> 00:25:02,369
at events at icc sydney unless safety or

519
00:24:59,730 --> 00:25:04,410
legality is compromised and quote she

520
00:25:02,369 --> 00:25:06,089
said when that story comes to us from

521
00:25:04,410 --> 00:25:20,900
jane hansen in the sunday telegraph

522
00:25:06,089 --> 00:25:24,480
published on the fifth of march 2017 and

523
00:25:20,900 --> 00:25:28,410
now direct from the cafe at australia's

524
00:25:24,480 --> 00:25:29,360
science channel its brouhaha with kelly

525
00:25:28,410 --> 00:25:32,170
wang

526
00:25:29,359 --> 00:25:34,939
[Music]

527
00:25:32,170 --> 00:25:38,330
I'm so excited to be here honoring

528
00:25:34,940 --> 00:25:41,210
science at a 20-17 oscars at the

529
00:25:38,329 --> 00:25:43,879
ceremony african american nasa physicist

530
00:25:41,210 --> 00:25:45,920
and mathematician Katherine Johnson the

531
00:25:43,880 --> 00:25:47,930
inspiration behind the hit movie hidden

532
00:25:45,920 --> 00:25:50,480
figures was invited on stage two

533
00:25:47,930 --> 00:25:52,789
standing ovations and if that didn't

534
00:25:50,480 --> 00:25:56,630
bring a tear to your eye well nothing

535
00:25:52,789 --> 00:25:58,940
will and to Iranian Americans engineer

536
00:25:56,630 --> 00:26:01,220
and wells fest self-funded astronaut and

537
00:25:58,940 --> 00:26:03,950
no Cheyenne sorry and former NASA

538
00:26:01,220 --> 00:26:06,289
scientists furrows naderi accepted the

539
00:26:03,950 --> 00:26:09,100
best foreign language Oscar on behalf of

540
00:26:06,289 --> 00:26:12,079
Iranian film director as car for hottie

541
00:26:09,099 --> 00:26:14,500
then of course this is scientific and

542

00:26:12,079 --> 00:26:16,639
technical awards held two weeks ago

543
00:26:14,500 --> 00:26:18,470
everything from advances in camera

544
00:26:16,640 --> 00:26:20,660
senses to development of new facial

545
00:26:18,470 --> 00:26:23,180
tracking technologies where monks there

546
00:26:20,660 --> 00:26:26,180
is recognized as you so without further

547
00:26:23,180 --> 00:26:37,180
ado the most accurate depiction of

548
00:26:26,180 --> 00:26:42,529
science in a film goes to lala land oh

549
00:26:37,180 --> 00:26:47,769
wait a second guys thank you oh this is

550
00:26:42,529 --> 00:26:47,769
not a jerk the winner is hidden figures

551
00:26:47,859 --> 00:26:58,000
for more brouhaha and Australian science

552
00:26:51,230 --> 00:26:58,000
head for ww Australia science TV

553
00:26:59,069 --> 00:27:08,589
[Music]

554
00:27:03,599 --> 00:27:12,699
from the Glasgow skeptics homeopathy in

555
00:27:08,589 --> 00:27:14,889
the UK with Michael Marshall now this is

556
00:27:12,700 --> 00:27:20,710

happening on the twenty-seventh of march

557

00:27:14,890 --> 00:27:25,570

from 7pm the Admiral bar 72 a waterloo

558

00:27:20,710 --> 00:27:27,610

street in glasgow homeopathy is one of

559

00:27:25,569 --> 00:27:30,129

the most widely debunked forms of

560

00:27:27,609 --> 00:27:32,679

alternative medicine yet homeopathic

561

00:27:30,130 --> 00:27:35,470

remedies adorn the shelves of respected

562

00:27:32,680 --> 00:27:39,370

pharmacies and are funded by taxpayers

563

00:27:35,470 --> 00:27:41,380

on the NHS how big of a problem is this

564

00:27:39,369 --> 00:27:44,379

using information and personal

565

00:27:41,380 --> 00:27:46,530

experiences gathered during his last six

566

00:27:44,380 --> 00:27:49,930

years of campaigning against homeopathy

567

00:27:46,529 --> 00:27:52,299

Michael Marshall will highlight how much

568

00:27:49,930 --> 00:27:54,549

money is spent on homeopathic remedies

569

00:27:52,299 --> 00:27:57,339

and how this gives undeserved

570

00:27:54,549 --> 00:27:59,740

credibility to homeopathy how such

571
00:27:57,339 --> 00:28:03,279
remedies can lead to genuine harm and

572
00:27:59,740 --> 00:28:05,500
what you can do to help this event is

573
00:28:03,279 --> 00:28:07,480
free to attend although they will be

574
00:28:05,500 --> 00:28:09,220
asking for donations at the end of the

575
00:28:07,480 --> 00:28:11,920
talk but you are under no obligation

576
00:28:09,220 --> 00:28:15,670
whatsoever to donate maybe you can

577
00:28:11,920 --> 00:28:17,950
donate homeopathic Lee hmm however any

578
00:28:15,670 --> 00:28:20,230
money that is donated is used to fund

579
00:28:17,950 --> 00:28:23,110
the overhead costs and travel and

580
00:28:20,230 --> 00:28:25,180
accommodation for speakers so that's

581
00:28:23,109 --> 00:28:28,959
homeopathy in the UK with Michael

582
00:28:25,180 --> 00:28:32,650
Marshall the 27th of March at 7pm the

583
00:28:28,960 --> 00:28:35,019
Admiral bar 72 a waterloo street in

584
00:28:32,650 --> 00:28:37,300
glasgow for more information check out

585
00:28:35,019 --> 00:28:40,119
the facebook page of the glasgow

586
00:28:37,299 --> 00:28:42,750
skeptics or just follow the links from

587
00:28:40,119 --> 00:28:51,869
this week's show knows

588
00:28:42,750 --> 00:28:51,869
[Music]

589
00:28:54,650 --> 00:29:05,909
[Music]

590
00:29:03,200 --> 00:29:08,308
in all the years of Australian skeptics

591
00:29:05,909 --> 00:29:11,580
had seen our skeptics in Australia

592
00:29:08,308 --> 00:29:14,398
kicked off in 1980-81 around that time

593
00:29:11,579 --> 00:29:15,689
the Victorian skeptics based in

594
00:29:14,398 --> 00:29:18,359
Melbourne have been one of the more

595
00:29:15,690 --> 00:29:21,840
active groups it's good to see they're

596
00:29:18,359 --> 00:29:23,998
keeping up this tradition as we read a

597
00:29:21,839 --> 00:29:26,699
report from skeptics comdata you

598
00:29:23,999 --> 00:29:30,600
published on the 17th of every item

599

00:29:26,700 --> 00:29:35,179
mendham vic skeptics reveal dangerous

600
00:29:30,599 --> 00:29:37,408
products on sale at no burn hospital

601
00:29:35,179 --> 00:29:39,149
Victorian skeptics committee member

602
00:29:37,409 --> 00:29:41,429
Peter Hogan and president Chris guest

603
00:29:39,148 --> 00:29:43,589
have revealed that a dangerous

604
00:29:41,429 --> 00:29:46,110
homeopathic teething product was

605
00:29:43,589 --> 00:29:48,359
available at melvins Royal Children's

606
00:29:46,109 --> 00:29:51,118
Hospital the product Highlands baby

607
00:29:48,359 --> 00:29:55,079
teething tablets had earlier been found

608
00:29:51,118 --> 00:29:57,118
by the US FDA to contain inconsistent

609
00:29:55,079 --> 00:29:59,638
amounts of the toxic substance

610
00:29:57,118 --> 00:30:02,849
belladonna and posed a risk to children

611
00:29:59,638 --> 00:30:04,498
vic skeptics member Peter Hogan has been

612
00:30:02,849 --> 00:30:06,480
investigating the sale of Highlands

613
00:30:04,499 --> 00:30:09,509

Teeling products in Australia he told

614

00:30:06,480 --> 00:30:11,940

Fairfax Media that quote I was quite

615

00:30:09,509 --> 00:30:13,919

shocked that the pharmacy at the Royal

616

00:30:11,940 --> 00:30:17,308

Children's Hospital was selling the

617

00:30:13,919 --> 00:30:19,440

stuff I'm concerned parents may be

618

00:30:17,308 --> 00:30:22,470

gambling with their baby's health end

619

00:30:19,440 --> 00:30:25,019

quote the FDA investigated the products

620

00:30:22,470 --> 00:30:27,960

links to the deaths of ten babies in

621

00:30:25,019 --> 00:30:29,759

America it urged parents to dispose of

622

00:30:27,960 --> 00:30:32,308

the tablets and seek medical care

623

00:30:29,759 --> 00:30:34,798

immediately if children experience

624

00:30:32,308 --> 00:30:37,648

symptoms including seizures difficulty

625

00:30:34,798 --> 00:30:40,138

breathing or agitation it requested the

626

00:30:37,648 --> 00:30:42,418

manufacturer standard homeopathic

627

00:30:40,138 --> 00:30:45,599

company to recall the products but the

628
00:30:42,419 --> 00:30:48,590
company refused late last year however a

629
00:30:45,599 --> 00:30:52,019
Highlands media release said it was

630
00:30:48,589 --> 00:30:54,628
discontinuing the distribution of its

631
00:30:52,019 --> 00:30:56,640
teething products in the US with quote

632
00:30:54,628 --> 00:30:58,969
much sadness and

633
00:30:56,640 --> 00:31:01,080
it after the FDA's safety warning

634
00:30:58,970 --> 00:31:04,440
australia's Therapeutic Goods

635
00:31:01,079 --> 00:31:06,869
Administration investigated hyland's

636
00:31:04,440 --> 00:31:09,720
teething and tablets and gel after the

637
00:31:06,869 --> 00:31:12,179
FDA issued its safety alert but it

638
00:31:09,720 --> 00:31:15,180
apparently found no quality issues and

639
00:31:12,180 --> 00:31:17,640
said no action would be taken Hogan

640
00:31:15,180 --> 00:31:20,009
questioned whether more testing was

641
00:31:17,640 --> 00:31:22,470
required considering the FDA's finding

642
00:31:20,009 --> 00:31:25,470
of inconsistent levels of belladonna

643
00:31:22,470 --> 00:31:27,420
between batches concerns about the

644
00:31:25,470 --> 00:31:30,529
ingredients of teething gels go back

645
00:31:27,420 --> 00:31:33,750
some years in Britain the ingredient

646
00:31:30,529 --> 00:31:36,660
solicited was removed from bonjela

647
00:31:33,750 --> 00:31:39,180
teething gel are free 2002 study by the

648
00:31:36,660 --> 00:31:41,550
commission on human medicines revealed

649
00:31:39,180 --> 00:31:43,259
it to be hazardous the study published

650
00:31:41,549 --> 00:31:45,269
in the medical journal of Australia

651
00:31:43,259 --> 00:31:47,549
found that chronic solicited

652
00:31:45,269 --> 00:31:50,129
intoxication could occur in children

653
00:31:47,549 --> 00:31:53,509
using these over-the-counter teething

654
00:31:50,130 --> 00:31:55,920
Jol's even at close to recommended doses

655
00:31:53,509 --> 00:31:58,640
symptoms of teething gel related

656

00:31:55,920 --> 00:32:02,130
poisonings include gastrointestinal

657
00:31:58,640 --> 00:32:05,090
problems hyperventilation tremor and

658
00:32:02,130 --> 00:32:08,310
memory lapses and the risk of death a

659
00:32:05,089 --> 00:32:10,949
TGA spokeswoman told Fairfax Media that

660
00:32:08,309 --> 00:32:13,109
samples had been tested from two batches

661
00:32:10,950 --> 00:32:15,690
of the tablets and no problems were

662
00:32:13,109 --> 00:32:18,389
identified she said one batch of the

663
00:32:15,690 --> 00:32:20,549
teething gel was tested and the level of

664
00:32:18,390 --> 00:32:23,640
belladonna did not warrant safety

665
00:32:20,549 --> 00:32:25,680
regulatory action quote however based on

666
00:32:23,640 --> 00:32:28,110
the information from the FDA we are

667
00:32:25,680 --> 00:32:30,470
considering where their testing of more

668
00:32:28,109 --> 00:32:32,789
samples will be useful in quote she said

669
00:32:30,470 --> 00:32:34,289
Highlands website lists numerous

670
00:32:32,789 --> 00:32:36,690

pharmacies that stock it's teething

671

00:32:34,289 --> 00:32:39,359

products in Australia Fairfax Media

672

00:32:36,690 --> 00:32:41,309

found it for sale at drew would pharmacy

673

00:32:39,359 --> 00:32:43,649

at the Royal Children's Hospital on

674

00:32:41,309 --> 00:32:45,269

Thursday vic skeptics president chris

675

00:32:43,650 --> 00:32:48,269

guest had earlier written to the

676

00:32:45,269 --> 00:32:51,210

pharmacy with the skeptics concerns but

677

00:32:48,269 --> 00:32:53,430

had not heard back belladonna also known

678

00:32:51,210 --> 00:32:55,590

as deadly nightshade as a plant that has

679

00:32:53,430 --> 00:32:57,870

been used in cosmetics and herbal

680

00:32:55,589 --> 00:33:00,659

medicine since the Middle Ages it is

681

00:32:57,869 --> 00:33:04,399

also used as a recreational drug because

682

00:33:00,660 --> 00:33:07,080

of the hallucinations it can produce and

683

00:33:04,400 --> 00:33:10,620

that story comes to us from skeptics

684

00:33:07,079 --> 00:33:12,269

come you and good on the Victorians

685
00:33:10,619 --> 00:33:16,199
sheptock for keeping up the pressure on

686
00:33:12,269 --> 00:33:19,980
all manner of Wu and quackery as the

687
00:33:16,200 --> 00:33:23,519
years drag on this fight against

688
00:33:19,980 --> 00:33:27,120
nonsense never ends and again and again

689
00:33:23,519 --> 00:33:29,879
we read about the real dangers of the

690
00:33:27,119 --> 00:33:43,098
Attic quackery known as homeopathy

691
00:33:29,880 --> 00:33:43,099
[Music]

692
00:33:44,950 --> 00:33:48,950
today this is dr. Karl Karl Christmas he

693
00:33:47,539 --> 00:33:51,200
proud to be a skeptic and you can find

694
00:33:48,950 --> 00:33:54,759
out more about me at dr. Karl calm and

695
00:33:51,200 --> 00:33:54,759
get lots of free stuff there as well

696
00:33:56,190 --> 00:34:03,209
[Music]

697
00:34:03,779 --> 00:34:10,980
here's my not spooky action at a

698
00:34:08,440 --> 00:34:10,980
distance

699

00:34:11,710 --> 00:34:16,250

i'm here at sydney botanical gardens

700

00:34:14,480 --> 00:34:18,650

today to speak to four remarkable people

701

00:34:16,250 --> 00:34:21,559

who are working on the restore and renew

702

00:34:18,650 --> 00:34:24,440

project which is gene sequencing at

703

00:34:21,559 --> 00:34:27,590

least 200 species of australian native

704

00:34:24,440 --> 00:34:30,590

plants in areas that have been damaged

705

00:34:27,590 --> 00:34:33,050

either by just urban urban encroachment

706

00:34:30,590 --> 00:34:35,360

or the land has been cleared or it's

707

00:34:33,050 --> 00:34:37,070

been an open cut mining site that sort

708

00:34:35,360 --> 00:34:39,530

of thing it's a big task ahead of them

709

00:34:37,070 --> 00:34:42,260

we're going to meet dr. Jason Bragg the

710

00:34:39,530 --> 00:34:44,420

scientific officer Dr Marlin vandamm

711

00:34:42,260 --> 00:34:46,730

earth of biodiversity research officer

712

00:34:44,420 --> 00:34:48,320

going to have a chat to dr. Moritz your

713

00:34:46,730 --> 00:34:51,079
asset oh he's the senior principal

714
00:34:48,320 --> 00:34:53,480
research scientist on restoring who knew

715
00:34:51,079 --> 00:34:56,719
and dr. Hannah McPherson she's in charge

716
00:34:53,480 --> 00:34:57,740
the biodiversity genetics so basically

717
00:34:56,719 --> 00:35:01,299
we're talking to for people that are a

718
00:34:57,739 --> 00:35:04,969
lot smarter than me so wish me luck

719
00:35:01,300 --> 00:35:05,870
Jason come on in look hey look now now

720
00:35:04,969 --> 00:35:07,819
I'm talking about someone who knows

721
00:35:05,869 --> 00:35:11,269
what's going on stock to Jason Bragg the

722
00:35:07,820 --> 00:35:12,769
scientific officer and your I think your

723
00:35:11,269 --> 00:35:13,820
thing could be big data wouldn't it

724
00:35:12,769 --> 00:35:16,070
you're in charge of getting all this

725
00:35:13,820 --> 00:35:18,380
information of the genetic sequencing in

726
00:35:16,070 --> 00:35:20,000
and recording it in what way what are

727
00:35:18,380 --> 00:35:21,349

you doing other than just recording it

728

00:35:20,000 --> 00:35:22,940

what are you doing with your code that

729

00:35:21,349 --> 00:35:25,639

you're writing for it so I'm doing

730

00:35:22,940 --> 00:35:29,389

analysis of the data I'm I'm taking the

731

00:35:25,639 --> 00:35:32,150

data as it comes in as it arrives to us

732

00:35:29,389 --> 00:35:36,349

and I'm trying to turn that into

733

00:35:32,150 --> 00:35:38,059

information that is more accessible to

734

00:35:36,349 --> 00:35:40,099

people trying to make decisions about

735

00:35:38,059 --> 00:35:42,380

where to get their seeds from how much

736

00:35:40,099 --> 00:35:44,059

information would be coming to you in an

737

00:35:42,380 --> 00:35:45,829

in physical form you tell me you're

738

00:35:44,059 --> 00:35:47,360

talking you're talking Petter flops of

739

00:35:45,829 --> 00:35:49,309

information how much you got coming your

740

00:35:47,360 --> 00:35:51,079

way but the data that we're using most

741

00:35:49,309 --> 00:35:53,029

of the time is already arriving in a

742
00:35:51,079 --> 00:35:56,659
fairly condensed form actually so where

743
00:35:53,030 --> 00:36:00,710
it's arriving to me in in quite a

744
00:35:56,659 --> 00:36:03,230
condensed form that is gigabytes certain

745
00:36:00,710 --> 00:36:05,360
certainly rather than terabytes yeah so

746
00:36:03,230 --> 00:36:07,039
let me get this straight you've got 200

747
00:36:05,360 --> 00:36:10,820
species of plants you're looking at an

748
00:36:07,039 --> 00:36:12,380
HBCU plant there's 20,000 genetic

749
00:36:10,820 --> 00:36:14,090
markers at least is that the kind of

750
00:36:12,380 --> 00:36:16,010
information looking for exactly yep

751
00:36:14,090 --> 00:36:17,690
that's precisely and all you got to do

752
00:36:16,010 --> 00:36:20,390
is just record that correctly in a form

753
00:36:17,690 --> 00:36:23,369
that people can understand well yeah so

754
00:36:20,389 --> 00:36:26,578
and it arrives it to me and as you

755
00:36:23,369 --> 00:36:29,278
say it's 20,000 genetic markers so 20

756
00:36:26,579 --> 00:36:31,230
place 20 thousand places in the genome

757
00:36:29,278 --> 00:36:33,869
where the different plants have a

758
00:36:31,230 --> 00:36:36,869
different base a different ACG or tea

759
00:36:33,869 --> 00:36:40,890
and then I try to refine it further than

760
00:36:36,869 --> 00:36:43,318
that I try to do analyses of it to turn

761
00:36:40,889 --> 00:36:46,798
it into a description for each of the

762
00:36:43,318 --> 00:36:49,980
species about how much genetic change

763
00:36:46,798 --> 00:36:52,469
there is among individual plants in that

764
00:36:49,980 --> 00:36:55,199
species when when you go from place to

765
00:36:52,469 --> 00:36:57,868
place so if you go 100 kilometers down

766
00:36:55,199 --> 00:36:59,489
the road or 200 kilometers down the road

767
00:36:57,869 --> 00:37:01,470
from where you're standing how

768
00:36:59,489 --> 00:37:04,169
genetically different to the different

769
00:37:01,469 --> 00:37:06,389
individuals of this plant species get so

770

00:37:04,170 --> 00:37:09,230
you're recording in a digital way the

771
00:37:06,389 --> 00:37:12,629
diversity of a species precisely yep yep

772
00:37:09,230 --> 00:37:14,429
tell me do plants have as much junk DNA

773
00:37:12,630 --> 00:37:16,798
as humans do is there such a thing as

774
00:37:14,429 --> 00:37:19,798
junk DNA in plants it's enormously

775
00:37:16,798 --> 00:37:22,349
variable in fact so there's a species

776
00:37:19,798 --> 00:37:24,960
that occurs in Australia utricularia

777
00:37:22,349 --> 00:37:29,910
Gibbard that has one of the smallest

778
00:37:24,960 --> 00:37:32,400
genomes among flowering plants and if I

779
00:37:29,909 --> 00:37:34,768
recall it was remarkable in that it had

780
00:37:32,400 --> 00:37:38,309
very very little of what we would refer

781
00:37:34,768 --> 00:37:40,939
to as junk DNA on the other hand there

782
00:37:38,309 --> 00:37:43,739
are lots of plant species that have

783
00:37:40,940 --> 00:37:45,420
enormous genome so if the human genome I

784
00:37:43,739 --> 00:37:47,130

can't remember how big the the human

785

00:37:45,420 --> 00:37:49,048

genome is I don't have to that's not

786

00:37:47,130 --> 00:37:51,329

your area no I think it's on the order

787

00:37:49,048 --> 00:37:53,130

of three Giga bases or something like

788

00:37:51,329 --> 00:37:55,619

that but there are pine trees that that

789

00:37:53,130 --> 00:37:57,480

easily have 20 so so they really run the

790

00:37:55,619 --> 00:38:00,599

gamut yeah plants are extraordinarily

791

00:37:57,480 --> 00:38:02,699

diverse yeah I was going to ask us like

792

00:38:00,599 --> 00:38:04,048

we have to get into a few anomalous

793

00:38:02,699 --> 00:38:07,169

theory see what are you reckon about

794

00:38:04,048 --> 00:38:08,670

when the ABC the alien big cats people

795

00:38:07,170 --> 00:38:10,950

every once in a while they seem to see a

796

00:38:08,670 --> 00:38:12,329

large cat that they reckon is is in the

797

00:38:10,949 --> 00:38:14,449

bush land of Australia do you think we

798

00:38:12,329 --> 00:38:16,170

actually that could be an escaped

799
00:38:14,449 --> 00:38:18,480
non-natural one what do you think we've

800
00:38:16,170 --> 00:38:19,739
got an undocumented large cat wandering

801
00:38:18,480 --> 00:38:22,289
around out there people keep reckoning

802
00:38:19,739 --> 00:38:26,429
they see me once in a while well that's

803
00:38:22,289 --> 00:38:28,890
a great question i guess some i guess

804
00:38:26,429 --> 00:38:30,509
the geneticist in me is probably a

805
00:38:28,889 --> 00:38:35,400
little bit skeptical about that because

806
00:38:30,509 --> 00:38:36,778
it would probably would prefer okay not

807
00:38:35,400 --> 00:38:39,989
saying anything controversial here i

808
00:38:36,778 --> 00:38:42,778
shall proceed know that i think it would

809
00:38:39,989 --> 00:38:47,389
take quite a quite a large you know a

810
00:38:42,778 --> 00:38:50,489
reasonable population to to sustain a

811
00:38:47,389 --> 00:38:53,308
species of large cats especially over

812
00:38:50,489 --> 00:38:55,909
the time scales that we've over which

813
00:38:53,309 --> 00:38:58,680
they've been reported and it seems like

814
00:38:55,909 --> 00:39:00,358
it would be hard to sustain that that

815
00:38:58,679 --> 00:39:02,328
they'd be quite conspicuous if there

816
00:39:00,358 --> 00:39:06,568
were enough of them to have a viable

817
00:39:02,329 --> 00:39:10,140
population out there yeah so I guess I

818
00:39:06,568 --> 00:39:12,088
don't put a lot of stock in the alien do

819
00:39:10,139 --> 00:39:14,248
you think there might be a tasmanian

820
00:39:12,088 --> 00:39:15,960
tiger a very very very tiny population

821
00:39:14,248 --> 00:39:17,879
of them hanging out somewhere in

822
00:39:15,960 --> 00:39:21,449
Tasmania because it gets pretty remote

823
00:39:17,880 --> 00:39:23,700
there it does get remote there I I don't

824
00:39:21,449 --> 00:39:27,179
have a strong opinion on that but again

825
00:39:23,699 --> 00:39:30,838
that I'm sufficiently convinced that the

826
00:39:27,179 --> 00:39:32,699
Tasmanian tiger is extinct that it's an

827

00:39:30,838 --> 00:39:36,058
important reminder that that once it's

828
00:39:32,699 --> 00:39:37,588
gone it's gone and so I feel like I'm

829
00:39:36,059 --> 00:39:40,890
sufficiently convinced that it is

830
00:39:37,588 --> 00:39:44,369
extinct to to use it as a cautionary

831
00:39:40,889 --> 00:39:47,608
note and as an indication to us that we

832
00:39:44,369 --> 00:39:50,099
need to be careful with them the these

833
00:39:47,608 --> 00:39:52,199
amazing species that share Australia

834
00:39:50,099 --> 00:39:54,210
with us well look up welcome here to the

835
00:39:52,199 --> 00:39:55,409
skeptics am getting really sciency here

836
00:39:54,210 --> 00:39:57,539
I'm talking to someone who really knows

837
00:39:55,409 --> 00:39:59,759
their stuff I'm talking to a little

838
00:39:57,539 --> 00:40:01,289
doctor murdered co-receptor oh you

839
00:39:59,759 --> 00:40:03,659
southern on ordinate tell him what are

840
00:40:01,289 --> 00:40:05,430
you I'm central Italian from roms oh wow

841
00:40:03,659 --> 00:40:07,920

no mucking about they're making about

842

00:40:05,429 --> 00:40:09,358

yeah well actually before we go any

843

00:40:07,920 --> 00:40:10,920

further what is your favorite Italian

844

00:40:09,358 --> 00:40:13,528

dish because every Italian has feels

845

00:40:10,920 --> 00:40:15,838

very you almost have a fanaticism about

846

00:40:13,528 --> 00:40:18,690

food to keep the traditional asset pizza

847

00:40:15,838 --> 00:40:20,849

yeah italian-style pizza ah which means

848

00:40:18,690 --> 00:40:22,829

done properly done properly yes none

849

00:40:20,849 --> 00:40:26,999

that Chicago style stuff none of it

850

00:40:22,829 --> 00:40:28,829

pineapple now what drew you to getting

851

00:40:26,998 --> 00:40:30,268

your doctorate in what you did

852

00:40:28,829 --> 00:40:32,130

originally why did you decide to

853

00:40:30,268 --> 00:40:35,399

specialize in that because it's a lot of

854

00:40:32,130 --> 00:40:37,798

user uni well I was also interested in

855

00:40:35,400 --> 00:40:40,650

in plant conservation and at the time

856
00:40:37,798 --> 00:40:43,588
when I was doing my doctorate genetics

857
00:40:40,650 --> 00:40:45,750
which is a study of DNA was really

858
00:40:43,588 --> 00:40:48,719
coming to the fore and there was no one

859
00:40:45,750 --> 00:40:50,940
very few people doing what we know now

860
00:40:48,719 --> 00:40:52,529
is conservation genetics that is look at

861
00:40:50,940 --> 00:40:55,800
the distribution of genetic diversity

862
00:40:52,530 --> 00:41:00,120
across at that time rare species I was

863
00:40:55,800 --> 00:41:02,310
working with rare species and I can

864
00:41:00,119 --> 00:41:03,900
appreciate it there and then that it was

865
00:41:02,309 --> 00:41:05,820
really critical information because we

866
00:41:03,900 --> 00:41:07,440
can learn a lot from the from the DNA of

867
00:41:05,820 --> 00:41:10,110
species we can learn about the dynamics

868
00:41:07,440 --> 00:41:13,200
we can learn about the history we can

869
00:41:10,110 --> 00:41:16,620
see how much they really are threatened

870
00:41:13,199 --> 00:41:18,750
because their evolutionary background

871
00:41:16,619 --> 00:41:21,599
has been eroded so much that really they

872
00:41:18,750 --> 00:41:23,519
are much more susceptible to change and

873
00:41:21,599 --> 00:41:25,139
with the area you're dealing with which

874
00:41:23,519 --> 00:41:27,300
is at New South Wales of Australia what

875
00:41:25,139 --> 00:41:28,829
is one of the rare plant species that

876
00:41:27,300 --> 00:41:32,130
you would be glad to come across will

877
00:41:28,829 --> 00:41:34,110
find here well the one that we've done

878
00:41:32,130 --> 00:41:36,410
quite a bit of work with and it's been

879
00:41:34,110 --> 00:41:38,340
fun to work with is the wall I'm a pine

880
00:41:36,409 --> 00:41:41,819
the one I'm apart is particularly

881
00:41:38,340 --> 00:41:44,789
interesting because we initially thought

882
00:41:41,820 --> 00:41:47,370
that there was no genetic diversity at

883
00:41:44,789 --> 00:41:50,449
all across the four remaining

884

00:41:47,369 --> 00:41:54,630
populations but using some of the most

885
00:41:50,449 --> 00:41:56,909
modern and advanced DNA technologies we

886
00:41:54,630 --> 00:41:59,340
were actually able to find some genetic

887
00:41:56,909 --> 00:42:03,089
diversity now that doesn't might not

888
00:41:59,340 --> 00:42:05,880
seem as very important but we are now

889
00:42:03,090 --> 00:42:08,610
moving to the next phase where we are

890
00:42:05,880 --> 00:42:11,099
going to look at the single genes the

891
00:42:08,610 --> 00:42:13,829
single genes of these species and that

892
00:42:11,099 --> 00:42:15,329
will kinda tell us it's not not only so

893
00:42:13,829 --> 00:42:17,489
much maybe about looking at what's

894
00:42:15,329 --> 00:42:19,679
missing but maybe looking at what makes

895
00:42:17,489 --> 00:42:21,750
these species with such a low genetic

896
00:42:19,679 --> 00:42:24,179
background evolution background still

897
00:42:21,750 --> 00:42:25,889
survive do you think it's sort of

898
00:42:24,179 --> 00:42:27,179

evolutions got it to the point where it

899

00:42:25,889 --> 00:42:28,739

doesn't need a lot of diversity because

900

00:42:27,179 --> 00:42:31,440

it's almost perfected itself in its

901

00:42:28,739 --> 00:42:35,699

environment and there can be some of

902

00:42:31,440 --> 00:42:37,950

that and an example of that are what we

903

00:42:35,699 --> 00:42:40,859

know in evolutionary terms as Island

904

00:42:37,949 --> 00:42:43,980

radiation so when a small number of

905

00:42:40,860 --> 00:42:46,140

individuals end up on an island this

906

00:42:43,980 --> 00:42:50,010

valve on that island and then they

907

00:42:46,139 --> 00:42:52,529

speciated so different species all ready

908

00:42:50,010 --> 00:42:54,080

for them to be able to survive on that

909

00:42:52,530 --> 00:42:56,670

island as a small number of individuals

910

00:42:54,079 --> 00:42:59,608

it means that there

911

00:42:56,670 --> 00:43:02,869

particularly fit so in a way it may be

912

00:42:59,608 --> 00:43:05,880

more than having all sorts of different

913
00:43:02,869 --> 00:43:07,890
options of it to them more importantly

914
00:43:05,880 --> 00:43:12,059
it means that they have very few of

915
00:43:07,889 --> 00:43:14,159
those nasty alleles there could cause

916
00:43:12,059 --> 00:43:16,230
reduce your fitness like inbreeding we

917
00:43:14,159 --> 00:43:18,149
know we know what happens when you know

918
00:43:16,230 --> 00:43:19,588
there's a village with everybody's

919
00:43:18,150 --> 00:43:21,450
related to each other everybody's got

920
00:43:19,588 --> 00:43:23,969
the same surname anna is not a very good

921
00:43:21,449 --> 00:43:25,588
thing right but in some cases just

922
00:43:23,969 --> 00:43:27,419
happen at those few individuals get to

923
00:43:25,588 --> 00:43:29,659
the island didn't have any of those

924
00:43:27,420 --> 00:43:32,940
nasty genes and so they can survive

925
00:43:29,659 --> 00:43:34,588
accumulate diversity with time and then

926
00:43:32,940 --> 00:43:37,559
radiate into different species in

927

00:43:34,588 --> 00:43:40,798

different forms often when we put the

928

00:43:37,559 --> 00:43:44,220

two words plant and DNA together GMOs

929

00:43:40,798 --> 00:43:46,588

come to mind and Franken plant and Frank

930

00:43:44,219 --> 00:43:48,209

analytical Frank Reagan Bush people

931

00:43:46,588 --> 00:43:49,500

worry about Frank and bush Frank and

932

00:43:48,210 --> 00:43:50,670

bush and all this kind of thing no

933

00:43:49,500 --> 00:43:53,039

that's not that's not what we're about

934

00:43:50,670 --> 00:43:54,990

really about about obtaining the

935

00:43:53,039 --> 00:43:56,929

information interpret it and then making

936

00:43:54,989 --> 00:43:59,189

it available to the general public

937

00:43:56,929 --> 00:44:01,730

shawnee why do you think people get so

938

00:43:59,190 --> 00:44:03,780

alarmed about that as even actual

939

00:44:01,730 --> 00:44:05,460

manipulation like is being done is

940

00:44:03,780 --> 00:44:10,700

pretty much what happens naturally

941

00:44:05,460 --> 00:44:12,539
anyway it is I I think I think most of

942
00:44:10,699 --> 00:44:14,759
Industry and age people that do

943
00:44:12,539 --> 00:44:19,259
understand about this natural evolution

944
00:44:14,760 --> 00:44:21,420
process or the standard ways of breeding

945
00:44:19,260 --> 00:44:23,670
did you understand that the issue is not

946
00:44:21,420 --> 00:44:27,030
with with the genetic manipulation but

947
00:44:23,670 --> 00:44:30,088
it tends to me be more with that the

948
00:44:27,030 --> 00:44:32,640
companies that said manipulate the

949
00:44:30,088 --> 00:44:35,429
plants for their own benefits or they

950
00:44:32,639 --> 00:44:38,670
make it resistant to a specific beside

951
00:44:35,429 --> 00:44:39,899
that they produce yeah so look again it

952
00:44:38,670 --> 00:44:41,880
seems to be people don't have a problem

953
00:44:39,900 --> 00:44:44,130
with the science it's more like the the

954
00:44:41,880 --> 00:44:47,400
business end of it yeah I think that's

955
00:44:44,130 --> 00:44:49,200

that's that's what it is okay well I'm

956

00:44:47,400 --> 00:44:51,480

here with the the last two members of

957

00:44:49,199 --> 00:44:54,808

the restore and renew project Matalin

958

00:44:51,480 --> 00:44:56,460

for nomera and Hannah McPherson now what

959

00:44:54,809 --> 00:44:57,780

are your air is the project you're

960

00:44:56,460 --> 00:45:00,358

dealing with what what are you doing for

961

00:44:57,780 --> 00:45:02,970

the project I mainly look at species

962

00:45:00,358 --> 00:45:05,880

distributions and try to work on way to

963

00:45:02,969 --> 00:45:08,159

collect from and how to and what each

964

00:45:05,880 --> 00:45:09,110

species sort of interesting facts about

965

00:45:08,159 --> 00:45:11,539

it and they

966

00:45:09,110 --> 00:45:14,960

once we have all the information the

967

00:45:11,539 --> 00:45:16,969

genetic information I try to interpret

968

00:45:14,960 --> 00:45:20,990

the genetic information nation with this

969

00:45:16,969 --> 00:45:22,689

other information along with it mmm okay

970
00:45:20,989 --> 00:45:26,359
and what what's your part of the project

971
00:45:22,690 --> 00:45:28,909
I guess I come in at various points as a

972
00:45:26,360 --> 00:45:31,760
bit of other logistics kind of helper so

973
00:45:28,909 --> 00:45:35,960
trying to help deal with all the samples

974
00:45:31,760 --> 00:45:38,300
that we have coming in and and some of

975
00:45:35,960 --> 00:45:40,190
the processes to keep information and

976
00:45:38,300 --> 00:45:42,289
samples tracking together through the

977
00:45:40,190 --> 00:45:44,119
whole process you know you're dealing

978
00:45:42,289 --> 00:45:45,650
with 200 plants to start with what's the

979
00:45:44,119 --> 00:45:47,659
most obscure when you're dealing whether

980
00:45:45,650 --> 00:45:50,780
you think the most obscure the 200

981
00:45:47,659 --> 00:45:52,849
currently we've just got information for

982
00:45:50,780 --> 00:45:55,370
a plant called plectranthus parva

983
00:45:52,849 --> 00:45:57,920
florists don't cool name but what's it

984
00:45:55,369 --> 00:45:59,509
what's it do well we didn't know what it

985
00:45:57,920 --> 00:46:02,150
was doing until we got the information

986
00:45:59,510 --> 00:46:05,810
the genetic data and we realized this

987
00:46:02,150 --> 00:46:07,849
plant cell fertilizes oh so does that

988
00:46:05,809 --> 00:46:09,710
mean hanging that mean it's a sexual

989
00:46:07,849 --> 00:46:13,400
heavy-headed we describe it yeah test

990
00:46:09,710 --> 00:46:15,409
sex with itself okay oh okay but and so

991
00:46:13,400 --> 00:46:17,360
why don't we see a lot of it then if it

992
00:46:15,409 --> 00:46:20,109
doesn't need an extra 1-2 yeah it should

993
00:46:17,360 --> 00:46:24,590
you be going off like nuts I don't like

994
00:46:20,110 --> 00:46:27,380
it's it still go it's still out crosses

995
00:46:24,590 --> 00:46:29,900
as well but much less than we thought so

996
00:46:27,380 --> 00:46:32,059
we do see a lot of this plant it's very

997
00:46:29,900 --> 00:46:34,730
common it's not something particularly

998

00:46:32,059 --> 00:46:37,369
pretty it does make her beautiful blue

999
00:46:34,730 --> 00:46:40,070
and purple flowers perfect blue is kind

1000
00:46:37,369 --> 00:46:42,889
of rare yeah the blue is kind of nice as

1001
00:46:40,070 --> 00:46:44,480
well but the blue nyan they hired a bit

1002
00:46:42,889 --> 00:46:45,920
so I guess I said so what sort of

1003
00:46:44,480 --> 00:46:47,480
environment do they like they're like

1004
00:46:45,920 --> 00:46:50,119
sort of under rocks they like shade

1005
00:46:47,480 --> 00:46:52,250
where do they get into rocky rocky

1006
00:46:50,119 --> 00:46:55,069
shades along kuraki shades along creeks

1007
00:46:52,250 --> 00:46:59,030
um often you actually find them along

1008
00:46:55,070 --> 00:47:00,860
roads yeah it also clone it makes clones

1009
00:46:59,030 --> 00:47:02,930
of itself in addition to sell

1010
00:47:00,860 --> 00:47:04,730
fertilizing you can also just break a

1011
00:47:02,929 --> 00:47:08,929
bit off and plant it on me and it will

1012
00:47:04,730 --> 00:47:12,079

grow I'm so it's very commonly used in

1013

00:47:08,929 --> 00:47:13,579

restoration work and we still wonder why

1014

00:47:12,079 --> 00:47:16,670

does it still make these pretty flowers

1015

00:47:13,579 --> 00:47:18,710

if itself fertilizers so there's

1016

00:47:16,670 --> 00:47:20,000

something more to it still then what we

1017

00:47:18,710 --> 00:47:21,710

know at the moment it's still only

1018

00:47:20,000 --> 00:47:22,260

halfway along its evolutionary journey

1019

00:47:21,710 --> 00:47:23,610

like it

1020

00:47:22,260 --> 00:47:26,940

figured to get rid of the flowers yet

1021

00:47:23,610 --> 00:47:28,050

maybe maybe yeah I think it's um that's

1022

00:47:26,940 --> 00:47:29,490

one of the interesting things about

1023

00:47:28,050 --> 00:47:30,960

restore and renew is that we have to

1024

00:47:29,489 --> 00:47:33,179

sort of bring together all these

1025

00:47:30,960 --> 00:47:35,579

different bits of information like what

1026

00:47:33,179 --> 00:47:37,769

what fertilizes this thing how is it

1027
00:47:35,579 --> 00:47:39,929
pollinated all these different things or

1028
00:47:37,769 --> 00:47:42,210
is it even or does it what does it do

1029
00:47:39,929 --> 00:47:44,579
with itself like it's all these

1030
00:47:42,210 --> 00:47:46,050
different biological processes that we

1031
00:47:44,579 --> 00:47:48,179
have to consider when we're also looking

1032
00:47:46,050 --> 00:47:49,350
at the DNA and trying to try and

1033
00:47:48,179 --> 00:47:51,719
understand the patterns that we see

1034
00:47:49,349 --> 00:47:52,799
across the landscape we have a lot of

1035
00:47:51,719 --> 00:47:54,750
listeners to the show that are in

1036
00:47:52,800 --> 00:47:56,430
tertiary education are about to go into

1037
00:47:54,750 --> 00:47:58,739
tertiary education why would you

1038
00:47:56,429 --> 00:48:00,449
recommend your particular field of study

1039
00:47:58,739 --> 00:48:02,549
to someone who is going into uni rather

1040
00:48:00,449 --> 00:48:04,589
than another field why do you recommend

1041
00:48:02,550 --> 00:48:07,039
it what attracted you to it and why do

1042
00:48:04,590 --> 00:48:09,510
you think it's a good one to study

1043
00:48:07,039 --> 00:48:11,579
plants are really important we can't

1044
00:48:09,510 --> 00:48:15,480
live without them they clean the air

1045
00:48:11,579 --> 00:48:17,849
they make food and they beautiful and

1046
00:48:15,480 --> 00:48:19,530
every God has an interesting story I

1047
00:48:17,849 --> 00:48:21,599
look upset I've said on the show before

1048
00:48:19,530 --> 00:48:24,090
big family Western Australian pitcher

1049
00:48:21,599 --> 00:48:25,259
plant it's a coniferous plant stop love

1050
00:48:24,090 --> 00:48:26,880
it I've never been able to grow one

1051
00:48:25,260 --> 00:48:28,500
because the soil here is nothing like

1052
00:48:26,880 --> 00:48:30,480
Western Australia and it like swampy

1053
00:48:28,500 --> 00:48:33,210
soil I can't do that but what's your

1054
00:48:30,480 --> 00:48:34,800
favorite plant I don't have a favorite

1055

00:48:33,210 --> 00:48:36,389
player that's good see that's a

1056
00:48:34,800 --> 00:48:37,680
politically a good answer to make you

1057
00:48:36,389 --> 00:48:40,829
done with other plants will be ringing

1058
00:48:37,679 --> 00:48:42,809
up and getting upset we've got over 200

1059
00:48:40,829 --> 00:48:44,849
species and they restored a new species

1060
00:48:42,809 --> 00:48:47,369
list and I can't pick one I like them

1061
00:48:44,849 --> 00:48:50,039
all i also like many of the plants not

1062
00:48:47,369 --> 00:48:52,049
on the list as well oh okay if so how in

1063
00:48:50,039 --> 00:48:54,599
the field you preserve the DNA quickly

1064
00:48:52,050 --> 00:48:56,370
is it a freeze drying process do you do

1065
00:48:54,599 --> 00:48:57,690
yeah just free thought you're all you

1066
00:48:56,369 --> 00:49:00,179
actually physically freeze them what you

1067
00:48:57,690 --> 00:49:02,159
do so we take it s keys with ice and and

1068
00:49:00,179 --> 00:49:04,139
as soon as we pluck the leaves we put

1069
00:49:02,159 --> 00:49:07,529

them on ice and then we race back to

1070

00:49:04,139 --> 00:49:10,079

work and or if we're out in the field we

1071

00:49:07,530 --> 00:49:13,410

express post them back and then freeze

1072

00:49:10,079 --> 00:49:15,150

dry them and then once they're free

1073

00:49:13,409 --> 00:49:19,379

stride we could store them with silica

1074

00:49:15,150 --> 00:49:21,150

gel so they stay dry and like the final

1075

00:49:19,380 --> 00:49:22,530

questions here I'd like to ask you both

1076

00:49:21,150 --> 00:49:24,360

because you like getting out in the bush

1077

00:49:22,530 --> 00:49:25,769

I'd like recommended spots where people

1078

00:49:24,360 --> 00:49:27,390

can go that they don't normally get to

1079

00:49:25,769 --> 00:49:28,590

have you got a spot you'd recommend for

1080

00:49:27,389 --> 00:49:31,319

people to have a look at the amount of

1081

00:49:28,590 --> 00:49:33,990

thought going to I think close to Sydney

1082

00:49:31,320 --> 00:49:35,480

people could go up to the Blue Mountains

1083

00:49:33,989 --> 00:49:37,699

National Park Glee

1084
00:49:35,480 --> 00:49:40,820
brooke entrance there's a beautiful

1085
00:49:37,699 --> 00:49:42,589
swimming pool the Kelly pool pool and it

1086
00:49:40,820 --> 00:49:45,500
wonderful place to go never swim that's

1087
00:49:42,590 --> 00:49:48,140
good and you out and about it just last

1088
00:49:45,500 --> 00:49:49,820
weekend what would you recommend i just

1089
00:49:48,139 --> 00:49:51,980
went camping at wollondilly river and it

1090
00:49:49,820 --> 00:49:54,410
was just magic and so close to Sydney

1091
00:49:51,980 --> 00:49:56,150
really good okay well people listen to

1092
00:49:54,409 --> 00:49:58,579
keep an ear on eye on this and look

1093
00:49:56,150 --> 00:50:00,079
online for the restore and renew project

1094
00:49:58,579 --> 00:50:01,429
it's going to go for at least four years

1095
00:50:00,079 --> 00:50:04,150
but I think you got a lot more work

1096
00:50:01,429 --> 00:50:04,149
earlier than that

1097
00:50:09,489 --> 00:50:12,569
[Music]

1098
00:50:18,728 --> 00:50:25,698
and now a special note for fans of

1099
00:50:22,159 --> 00:50:29,318
maynard at maynard calm today you you

1100
00:50:25,699 --> 00:50:31,909
can download your FREE maynard calendar

1101
00:50:29,318 --> 00:50:35,659
download print out whack on the wall

1102
00:50:31,909 --> 00:50:38,088
spend 2017 with me not for your free

1103
00:50:35,659 --> 00:50:39,890
calendar no strings attached well you'll

1104
00:50:38,088 --> 00:50:45,619
have to attach some strings to put it on

1105
00:50:39,889 --> 00:51:00,969
the wall head for WWE not calm a you

1106
00:50:45,619 --> 00:51:00,969
[Music]

1107
00:51:03,239 --> 00:51:07,750
thank you for listening to the skeptic

1108
00:51:05,798 --> 00:51:10,449
zone on next week's show a special

1109
00:51:07,750 --> 00:51:13,358
report from Maynard at skeptics in the

1110
00:51:10,449 --> 00:51:14,919
pub which we had the other night here in

1111
00:51:13,358 --> 00:51:19,000
Sydney where may not ask the big

1112

00:51:14,920 --> 00:51:22,450
question about pub goers he finds out he

1113
00:51:19,000 --> 00:51:24,789
asks what do you know about witches and

1114
00:51:22,449 --> 00:51:26,710
witchcraft because last week on the show

1115
00:51:24,789 --> 00:51:29,140
we had the reading of a magic spell

1116
00:51:26,710 --> 00:51:30,789
against Donald Trump I noticed Donald

1117
00:51:29,139 --> 00:51:33,068
Trump still there so I guess the magic

1118
00:51:30,789 --> 00:51:35,609
spell didn't work I didn't think it

1119
00:51:33,068 --> 00:51:38,230
would but anyway Maynard wants to know

1120
00:51:35,608 --> 00:51:39,548
what do people think about witches or

1121
00:51:38,230 --> 00:51:42,699
more importantly what is their

1122
00:51:39,548 --> 00:51:45,429
understanding of witches and witchcraft

1123
00:51:42,699 --> 00:51:48,879
is at all comic stuff do they ride

1124
00:51:45,429 --> 00:51:50,919
broomsticks to have familiars we'll find

1125
00:51:48,880 --> 00:51:53,440
out what Sydney pub goers think next

1126
00:51:50,920 --> 00:51:55,480

week a big thank you to all those people

1127

00:51:53,440 --> 00:51:58,179

who helped make the show possible and

1128

00:51:55,480 --> 00:52:01,539

not only my show but main art as well at

1129

00:51:58,179 --> 00:52:05,798

Maynard com delay you by chipping in for

1130

00:52:01,539 --> 00:52:08,170

patreon more paypal it it makes all the

1131

00:52:05,798 --> 00:52:10,329

difference it simply is the difference

1132

00:52:08,170 --> 00:52:13,599

between having a show or not having a

1133

00:52:10,329 --> 00:52:16,539

show so if you enjoy the skeptic zone if

1134

00:52:13,599 --> 00:52:18,940

you enjoy these other podcasts too then

1135

00:52:16,539 --> 00:52:21,400

why not give back a little bit chip in

1136

00:52:18,940 --> 00:52:23,798

it can be as little as a dollar a week

1137

00:52:21,400 --> 00:52:25,660

or even less or five dollars a week you

1138

00:52:23,798 --> 00:52:29,338

won't notice that money gone at all it's

1139

00:52:25,659 --> 00:52:32,949

a couple of cups of coffee at most but

1140

00:52:29,338 --> 00:52:36,038

collectively it means that shows like

1141
00:52:32,949 --> 00:52:38,768
the skeptics owned and maynards podcast

1142
00:52:36,039 --> 00:52:41,049
keep going it's as simple as that and we

1143
00:52:38,768 --> 00:52:43,058
thank you but for this week with the

1144
00:52:41,048 --> 00:52:46,059
rain once again falling down outside my

1145
00:52:43,059 --> 00:52:49,170
window this is Richard Saunders signing

1146
00:52:46,059 --> 00:52:49,170
off from Sydney Australia

1147
00:52:51,420 --> 00:52:57,610
you've been listening to the skeptics

1148
00:52:53,860 --> 00:53:00,519
own podcast visit our website at wwc a

1149
00:52:57,610 --> 00:53:03,970
petting zoo TV for contacts an archive

1150
00:53:00,519 --> 00:53:06,670
of all episodes since 2008 and our

1151
00:53:03,969 --> 00:53:08,579
online store please support the skeptic

1152
00:53:06,670 --> 00:53:11,740
zone by following us on twitter at

1153
00:53:08,579 --> 00:53:15,369
skeptic zone liking us on facebook and

1154
00:53:11,739 --> 00:53:17,559
leaving a review on iTunes you can also

1155
00:53:15,369 --> 00:53:20,730
show your support by subscribing via

1156
00:53:17,559 --> 00:53:23,500
paypal for as little as 99 cents a week

1157
00:53:20,730 --> 00:53:25,150
the skeptic zone is an independent

1158
00:53:23,500 --> 00:53:27,579
production the views and opinions

1159
00:53:25,150 --> 00:53:29,200
expressed on the skeptic zone and not

1160
00:53:27,579 --> 00:53:32,049
necessarily those of australian

1161
00:53:29,199 --> 00:53:54,730
skeptical or any other skeptical

1162
00:53:32,050 --> 00:53:57,580
organization hello hi hello hello hell

1163
00:53:54,730 --> 00:54:01,090
yeah I'm not too bad today and just have

1164
00:53:57,579 --> 00:54:05,190
to fiddle the levels here with this can

1165
00:54:01,090 --> 00:54:11,220
you just say count to 10 for me please I

1166
00:54:05,190 --> 00:54:22,210
don't know if I can do that 10 9 8 7 6

1167
00:54:11,219 --> 00:54:25,779
50 to 100 close enough you like me to

1168
00:54:22,210 --> 00:54:27,429
shut up no I just have to fiddle the

1169

00:54:25,780 --> 00:54:30,640
levels here you're coming through very

1170
00:54:27,429 --> 00:54:33,669
loud and clear alright so yes so we'll

1171
00:54:30,639 --> 00:54:38,230
just we'll just see how it goes in okie

1172
00:54:33,670 --> 00:54:45,039
dokie yeah only the listeners knew what

1173
00:54:38,230 --> 00:54:47,619
goes on when we're recording behind the

1174
00:54:45,039 --> 00:54:49,449
scenes alright are you ready up there um

1175
00:54:47,619 --> 00:54:50,930
hang on let me just have a sip of tea

1176
00:54:49,449 --> 00:54:54,239
alright

1177
00:54:50,929 --> 00:54:54,239
[Applause]

1178
00:54:57,409 --> 00:55:04,440
do you mainly all right whole class and

1179
00:55:02,730 --> 00:55:08,358
joining me now on the line all the way

1180
00:55:04,440 --> 00:55:08,358
from the north coast of new support