

**SKEPTIC
ZONE**



THINKING CAPS
MUST BE WORN
IN THIS AREA

The
Podcast
from
Australia
for
Science
and
Reason

www.skepticzone.tv

1
00:00:27,120 --> 00:00:23,490
hello and welcome to the skeptic zone

2
00:00:30,660 --> 00:00:27,130
episode number 64 for the eighth of

3
00:00:37,940 --> 00:00:30,670
january two thousand and ten or twenty

4
00:00:41,520 --> 00:00:37,950
ten no Alice can you say that 10 Oh 2010

5
00:00:43,920 --> 00:00:41,530
let's just stick with 2010 on this

6
00:00:46,260 --> 00:00:43,930
week's show we have a presentation given

7
00:00:49,049 --> 00:00:46,270
in 2005 at the Australian skeptics

8
00:00:51,510 --> 00:00:49,059
National Convention by loretta marin

9
00:00:54,360 --> 00:00:51,520
otherwise known as the jelly bean lady

10
00:00:57,450 --> 00:00:54,370
now her crusade is to rid the world of

11
00:01:00,450 --> 00:00:57,460
quack products like magnetic underlays

12
00:01:03,569 --> 00:01:00,460
and so forth using jelly beans as an

13
00:01:06,450 --> 00:01:03,579

example jelly bean power coming up in a

14

00:01:08,400 --> 00:01:06,460

few minutes after that a little report

15

00:01:10,740 --> 00:01:08,410

by dr. rate she and myself as we take a

16

00:01:13,080 --> 00:01:10,750

stroll down King Street in Newtown a

17

00:01:16,139 --> 00:01:13,090

suburb here in Sydney and visit a few

18

00:01:19,230 --> 00:01:16,149

pharmacies along the way that's followed

19

00:01:22,469 --> 00:01:19,240

by dr. rachy reports where she talks to

20

00:01:25,590 --> 00:01:22,479

dr. Sheena McGowan about parasites and

21

00:01:28,200 --> 00:01:25,600

malaria very interesting so sit back

22

00:01:43,840 --> 00:01:28,210

have a nice glass of yaks milk and enjoy

23

00:01:50,120 --> 00:01:47,480

breast cancer survivor Loretta Marin is

24

00:01:53,149 --> 00:01:50,130

a long time crusader against quackery of

25

00:01:55,999 --> 00:01:53,159

all forms she is best known as the jelly

26

00:01:58,700 --> 00:01:56,009

bean lady and here in a talk given in

27

00:02:01,249 --> 00:01:58,710

2005 at the Australian skeptics National

28

00:02:03,679 --> 00:02:01,259

Convention she discusses how jelly beans

29

00:02:10,999 --> 00:02:03,689

can often be better than magnetic

30

00:02:13,130 --> 00:02:11,009

therapy right first of all I show you

31

00:02:14,870 --> 00:02:13,140

what all this stuff is I i can to come

32

00:02:17,330 --> 00:02:14,880

to presentations with a truckload of

33

00:02:19,280 --> 00:02:17,340

things so one thing here is I'm very

34

00:02:21,199 --> 00:02:19,290

disappointed about this morning where

35

00:02:24,140 --> 00:02:21,209

we're not allowed to do that multi-level

36

00:02:25,550 --> 00:02:24,150

marketing because here I have something

37

00:02:28,160 --> 00:02:25,560

that we can all make a lot of money on

38

00:02:31,190 --> 00:02:28,170

thats my acupressure jelly bean

39

00:02:33,800 --> 00:02:31,200

bracelets my jelly bean pain relief

40

00:02:35,180 --> 00:02:33,810

jewelry and my jelly bean detox pads the

41

00:02:38,289 --> 00:02:35,190

ones that you stick on your feet and

42

00:02:42,199 --> 00:02:38,299

overnight sucks out all the toxins and

43

00:02:44,629 --> 00:02:42,209

there's also the jelly bean herbal tea

44

00:02:46,789 --> 00:02:44,639

in it generally is it heard because it

45

00:02:49,400 --> 00:02:46,799

comes from sugar herbs come from plum

46

00:02:51,559 --> 00:02:49,410

and this is my other one which i think

47

00:02:54,800 --> 00:02:51,569

is really good this is my multi

48

00:02:56,120 --> 00:02:54,810

homeopathic remedy it may cure every

49

00:02:59,030 --> 00:02:56,130

disease and health condition and in

50

00:03:01,729 --> 00:02:59,040

there it's got vital force and memory of

51
00:03:04,490 --> 00:03:01,739
the remedy and you all watched second

52
00:03:06,770 --> 00:03:04,500
opinion so you do understand homeopathic

53
00:03:09,289 --> 00:03:06,780
remedies in that it's about the memory

54
00:03:10,759 --> 00:03:09,299
of what you've put in there now we do

55
00:03:11,990 --> 00:03:10,769
have some good medication here that

56
00:03:15,979 --> 00:03:12,000
really doesn't have too many side

57
00:03:18,140 --> 00:03:15,989
effects I put the pills there and this

58
00:03:20,599 --> 00:03:18,150
is the placebo pills the famous placebo

59
00:03:23,300 --> 00:03:20,609
pills proven should be thirty percent

60
00:03:26,539 --> 00:03:23,310
effective ensuring everything proven by

61
00:03:28,729 --> 00:03:26,549
thousands of clinical trials all over

62
00:03:31,789 --> 00:03:28,739
the world so that's one thing that I do

63
00:03:34,430 --> 00:03:31,799

is I haven't found any side effects on

64

00:03:37,009 --> 00:03:34,440

it yet in fact it's actually good for

65

00:03:39,920 --> 00:03:37,019

diabetics and people giving up smoking

66

00:03:41,659 --> 00:03:39,930

because they go hypoglycemic and I

67

00:03:43,220 --> 00:03:41,669

believe there's some new pace that you

68

00:03:45,410 --> 00:03:43,230

put on your ulcers that's got some

69

00:03:47,630 --> 00:03:45,420

glucose base but that's medical and

70

00:03:49,250 --> 00:03:47,640

that's not my area but anything to do

71

00:03:49,750 --> 00:03:49,260

with that term jelly beans i'm

72

00:03:52,240 --> 00:03:49,760

interested

73

00:03:54,160 --> 00:03:52,250

in a guy so that when he makes bit he

74

00:03:57,069 --> 00:03:54,170

puts a jack a black jellybeans and it

75

00:03:59,050 --> 00:03:57,079

stops all the the GU going unit so jelly

76

00:04:00,940 --> 00:03:59,060

beans are very very handy sorts of

77

00:04:04,410 --> 00:04:00,950

things to have now I've got some

78

00:04:06,640 --> 00:04:04,420

booklets here did you all get one oh

79

00:04:08,860 --> 00:04:06,650

good because there's plenty left if

80

00:04:11,250 --> 00:04:08,870

anybody wants some more and you would

81

00:04:16,689 --> 00:04:11,260

have probably noticed in the centerfold

82

00:04:18,939 --> 00:04:16,699

Geraldine's a centerfold girl as much

83

00:04:25,689 --> 00:04:18,949

information as I could put in about this

84

00:04:28,300 --> 00:04:25,699

particular adverse events I've got the

85

00:04:30,490 --> 00:04:28,310

iridology chart there so if anybody has

86

00:04:33,490 --> 00:04:30,500

any problems later on I can certainly

87

00:04:35,290 --> 00:04:33,500

help Oh wrong one when this came out

88

00:04:39,570 --> 00:04:35,300

they had an invented electricity so I

89

00:04:41,740 --> 00:04:39,580

think they must have done it by this and

90

00:04:42,969 --> 00:04:41,750

compliments of Geraldine now there's

91

00:04:44,650 --> 00:04:42,979

only one person in the world like an

92

00:04:47,290 --> 00:04:44,660

email and say hello Geraldine do you

93

00:04:48,909 --> 00:04:47,300

have an eyeball and she said yes I've

94

00:04:51,430 --> 00:04:48,919

got an eyeball a kidney and a heart and

95

00:04:54,939 --> 00:04:51,440

she gave them to me for my presentations

96

00:05:00,070 --> 00:04:54,949

as well over here is my homie who's open

97

00:05:03,580 --> 00:05:00,080

that there's a snake and the spider

98

00:05:10,360 --> 00:05:03,590

missing now calm down they're natural so

99

00:05:14,439 --> 00:05:10,370

they say as anybody just quite look

100

00:05:20,140 --> 00:05:14,449

around as anybody got all right wretches

101
00:05:22,270 --> 00:05:20,150
over there come on Rex Rex come on just

102
00:05:31,300 --> 00:05:22,280
just throwing these are good he's a good

103
00:05:38,969 --> 00:05:31,310
catch I'm finally now the Cobra and

104
00:05:47,900 --> 00:05:42,670
come on sweetheart now these are genuine

105
00:05:53,760 --> 00:05:51,629
go ahead the anthrax we've got the air

106
00:05:57,150 --> 00:05:53,770
tracks i think but he would keep

107
00:05:59,370 --> 00:05:57,160
stealing that I've got no idea why it's

108
00:06:01,140 --> 00:05:59,380
all natural perfectly safe and the

109
00:06:07,110 --> 00:06:01,150
citric acid in the mercury and the

110
00:06:10,320 --> 00:06:07,120
caffeine caffeine and there's the

111
00:06:12,330 --> 00:06:10,330
million dollars still there James

112
00:06:14,129 --> 00:06:12,340
Randy's million dollars for anyone

113
00:06:15,810 --> 00:06:14,139

homeopathic remedy that can be proven

114

00:06:17,700 --> 00:06:15,820

I've offered that money to a lot of

115

00:06:20,850 --> 00:06:17,710

people and they've never taken me up on

116

00:06:24,300 --> 00:06:20,860

it now before I came I had trouble

117

00:06:26,430 --> 00:06:24,310

sleeping so I took my homeopathic remedy

118

00:06:29,670 --> 00:06:26,440

for flipping which is one drop of

119

00:06:34,290 --> 00:06:29,680

caffeine in a swimming pool and for

120

00:06:39,870 --> 00:06:34,300

those of you that don't know homeopathy

121

00:06:41,159 --> 00:06:39,880

it's one drop in now I did this last

122

00:06:45,420 --> 00:06:41,169

time and I had to go round the board

123

00:06:48,420 --> 00:06:45,430

twice now honestly you know those kids

124

00:06:51,870 --> 00:06:48,430

with critical thinking do you really

125

00:06:55,050 --> 00:06:51,880

think that one drop in that many will

126
00:06:57,840 --> 00:06:55,060
have any effect at all homeopathy don't

127
00:07:02,430 --> 00:06:57,850
knock unless you try it and I thought

128
00:07:07,110 --> 00:07:02,440
they can can't possibly be real huh so

129
00:07:09,210 --> 00:07:07,120
I've written on here 300,000 homeopaths

130
00:07:11,700 --> 00:07:09,220
and 40 homeopathic university

131
00:07:16,830 --> 00:07:11,710
universities can't be wrong so therefore

132
00:07:18,870 --> 00:07:16,840
homeopathy must work if I do that for

133
00:07:22,140 --> 00:07:18,880
presentations for seniors I have a lot

134
00:07:24,330 --> 00:07:22,150
of fun doing it I've also had a lot of

135
00:07:28,320 --> 00:07:24,340
very negative feedback from the people

136
00:07:30,510 --> 00:07:28,330
that like their natural therapy and let

137
00:07:32,640 --> 00:07:30,520
me actually quite abusive live even step

138
00:07:33,779 --> 00:07:32,650

made some fairly personal statements

139

00:07:36,170 --> 00:07:33,789

about me as well which I thought was

140

00:07:39,630 --> 00:07:36,180

quite good because I will use it all for

141

00:07:41,940 --> 00:07:39,640

writing articles and though the first

142

00:07:45,719 --> 00:07:41,950

one I'd like to talk about is how I

143

00:07:48,000 --> 00:07:45,729

became the power of one in situations

144

00:07:49,920 --> 00:07:48,010

whereby somebody famous gets an illness

145

00:07:53,250 --> 00:07:49,930

we talk christopher region is broken

146

00:07:54,630 --> 00:07:53,260

back Michael J Fox what they do is they

147

00:07:56,310 --> 00:07:54,640

suddenly champion the cause of that

148

00:07:59,310 --> 00:07:56,320

illness and it's fantastic that they do

149

00:08:01,110 --> 00:07:59,320

that because they use their life skills

150

00:08:03,450 --> 00:08:01,120

and their position to raise awareness

151
00:08:06,360 --> 00:08:03,460
and raise money for research how good is

152
00:08:09,000 --> 00:08:06,370
that my favorite is Lance Armstrong now

153
00:08:11,760 --> 00:08:09,010
he rides a bicycle for you ladies that

154
00:08:15,390 --> 00:08:11,770
don't follow the Tour de France not an

155
00:08:17,040 --> 00:08:15,400
exercise bicycle a proper one in 1996

156
00:08:19,770 --> 00:08:17,050
this guy was rated number one in the

157
00:08:24,210 --> 00:08:19,780
world as a cyclist you know with a

158
00:08:30,360 --> 00:08:24,220
little cute bendix outfit big thick

159
00:08:34,130 --> 00:08:30,370
thighs any rat dog skinny though these

160
00:08:36,150 --> 00:08:34,140
guys anyway he was diagnosed with cancer

161
00:08:39,540 --> 00:08:36,160
1996 he was given a twenty percent

162
00:08:42,450 --> 00:08:39,550
chance of surviving he had really

163
00:08:43,830 --> 00:08:42,460

radical chemotherapy all that kind of

164

00:08:45,390 --> 00:08:43,840

stuff and he decided he wasn't going to

165

00:08:47,130 --> 00:08:45,400

die he was going to do everything he

166

00:08:50,630 --> 00:08:47,140

could and for those of you that watch

167

00:08:53,520 --> 00:08:50,640

the Tour de France he won it for the

168

00:08:56,670 --> 00:08:53,530

just a couple of weeks here I thought

169

00:08:58,560 --> 00:08:56,680

where that guy is inspirational and he's

170

00:09:01,830 --> 00:08:58,570

doing so much to raise awareness for

171

00:09:04,740 --> 00:09:01,840

these things too sometimes it takes some

172

00:09:07,170 --> 00:09:04,750

really negative event before we'll go

173

00:09:09,690 --> 00:09:07,180

out and a lemon follow a passion that we

174

00:09:11,250 --> 00:09:09,700

have to try to make some changes the

175

00:09:13,740 --> 00:09:11,260

fact that you're keen to this conference

176

00:09:16,110 --> 00:09:13,750

suggests to me that perhaps there isn't

177

00:09:18,570 --> 00:09:16,120

a perfect world it and you've all got

178

00:09:21,030 --> 00:09:18,580

some agenda that you want would like to

179

00:09:22,350 --> 00:09:21,040

see changed I say with creationist when

180

00:09:24,780 --> 00:09:22,360

they work I had to get the three fast

181

00:09:28,760 --> 00:09:24,790

and bloody dinosaurs on the Ark's I'm

182

00:09:35,190 --> 00:09:31,890

third every day in Australia 30 women

183

00:09:39,900 --> 00:09:35,200

are diagnosed with cancer breast cancer

184

00:09:41,580 --> 00:09:39,910

five died unfortunately first of october

185

00:09:44,190 --> 00:09:41,590

two thousand three i was one of those

186

00:09:46,800 --> 00:09:44,200

women i'm sitting there with the

187

00:09:48,870 --> 00:09:46,810

perfectly straight face doctors telling

188

00:09:51,570 --> 00:09:48,880

me about these horrific things that

189

00:09:54,060 --> 00:09:51,580

could happen to me no cutting and

190

00:09:56,220 --> 00:09:54,070

cutting and burning and drugs and I just

191

00:09:59,250 --> 00:09:56,230

couldn't believe I'm a digital I'm fine

192

00:10:01,260 --> 00:09:59,260

I feel fantastic now the only reason I'm

193

00:10:03,990 --> 00:10:01,270

going to live to be a hundred is because

194

00:10:09,390 --> 00:10:04,000

of Orthodox mentor because they got me

195

00:10:12,180 --> 00:10:09,400

early bit of a snip bit of a burn and a

196

00:10:15,270 --> 00:10:12,190

lot of help to make sure that I'm going

197

00:10:17,130 --> 00:10:15,280

to be one of the survivors when I had

198

00:10:20,310 --> 00:10:17,140

for those of you that have been touched

199

00:10:22,650 --> 00:10:20,320

with cancer most of you would have might

200

00:10:24,500 --> 00:10:22,660

be a neighbor friend family member even

201
00:10:27,170 --> 00:10:24,510
yourselves or some gentlemen here before

202
00:10:30,240 --> 00:10:27,180
you know that the treatment is very long

203
00:10:32,520 --> 00:10:30,250
for me it was four months from my

204
00:10:35,280 --> 00:10:32,530
diagnosis to the last treatment the last

205
00:10:37,290 --> 00:10:35,290
eight weeks was driving a to our return

206
00:10:40,980 --> 00:10:37,300
trip into brisbane for like twenty

207
00:10:42,510 --> 00:10:40,990
second radiotherapy treatment and during

208
00:10:44,790 --> 00:10:42,520
those times sometimes the machine would

209
00:10:46,830 --> 00:10:44,800
be down and I'd be an hour or two in the

210
00:10:49,080 --> 00:10:46,840
waiting room I talked to the other

211
00:10:50,790 --> 00:10:49,090
patients back sometimes I had to talk to

212
00:10:53,100 --> 00:10:50,800
them through a voice books these were

213
00:10:55,080 --> 00:10:53,110

wonderful people you know mothers with

214

00:10:56,820 --> 00:10:55,090

little children there they're all going

215

00:10:59,670 --> 00:10:56,830

through the same horrific events that i

216

00:11:01,710 --> 00:10:59,680

was and i know that a lot of them won't

217

00:11:04,050 --> 00:11:01,720

be here now they'll be dead or they'll

218

00:11:05,460 --> 00:11:04,060

be dead soon some of them were really at

219

00:11:07,950 --> 00:11:05,470

the end you know being wheeled in an

220

00:11:10,290 --> 00:11:07,960

hour if i can achieve anything through

221

00:11:12,390 --> 00:11:10,300

getting my cancer through the Sun that

222

00:11:14,190 --> 00:11:12,400

I'm having with people like yourself I

223

00:11:16,050 --> 00:11:14,200

will dedicate it to those people because

224

00:11:19,710 --> 00:11:16,060

they sure didn't deserve what they're

225

00:11:21,720 --> 00:11:19,720

getting wonderful people Nationals

226

00:11:23,670 --> 00:11:21,730

seniors Association is anybody a member

227

00:11:29,129 --> 00:11:23,680

of national seniors Association like all

228

00:11:36,879 --> 00:11:34,210

after the eight weeks you know too young

229

00:11:38,769 --> 00:11:36,889

not too young to get a bargain after the

230

00:11:40,480 --> 00:11:38,779

eight weeks of going in and out one day

231

00:11:43,449 --> 00:11:40,490

it was suddenly over and I woke up the

232

00:11:46,120 --> 00:11:43,459

next day and I was really a bit of a

233

00:11:48,550 --> 00:11:46,130

zombie so you're just there your whole

234

00:11:49,930 --> 00:11:48,560

life suddenly was planning oh we got to

235

00:11:51,460 --> 00:11:49,940

get there by 11 every day is a different

236

00:11:53,559 --> 00:11:51,470

time I'm going to get there by eleven

237

00:11:55,269 --> 00:11:53,569

o'clock today that's it that was your

238

00:11:58,300 --> 00:11:55,279

whole day taken over and recovering and

239

00:12:00,660 --> 00:11:58,310

at the end of it you burnt you totally

240

00:12:03,040 --> 00:12:00,670

met all these amazing people you

241

00:12:05,559 --> 00:12:03,050

sometimes really angry I was sometimes

242

00:12:07,360 --> 00:12:05,569

really anxious sad shocked all these

243

00:12:10,210 --> 00:12:07,370

things it was a rollercoaster trip for

244

00:12:12,220 --> 00:12:10,220

me and really your memories gone you

245

00:12:13,720 --> 00:12:12,230

can't remember names you talk about that

246

00:12:15,850 --> 00:12:13,730

bloke with the colorful shirt in the

247

00:12:18,670 --> 00:12:15,860

front row that he got from salvation

248

00:12:21,129 --> 00:12:18,680

army data you end up great long

249

00:12:23,050 --> 00:12:21,139

sentences and they fell for it or Peter

250

00:12:25,600 --> 00:12:23,060

or this for that and you can't believe

251
00:12:29,170 --> 00:12:25,610
where's my memory God that most of us

252
00:12:32,680 --> 00:12:29,180
come back but I talked to my GP who is

253
00:12:34,300 --> 00:12:32,690
over there who name is here being

254
00:12:36,220 --> 00:12:34,310
fantastic to work with her on the

255
00:12:38,500 --> 00:12:36,230
website and I said what's wrong with me

256
00:12:40,900 --> 00:12:38,510
she said you've got traumatic stress and

257
00:12:44,439 --> 00:12:40,910
I thought well she's right that's a

258
00:12:46,449 --> 00:12:44,449
trauma you know and so I understand now

259
00:12:50,410 --> 00:12:46,459
that what I was going through was quite

260
00:12:53,769 --> 00:12:50,420
a normal thing to happen national scene

261
00:12:56,350 --> 00:12:53,779
is Association 300,000 members round

262
00:13:00,160 --> 00:12:56,360
Australia the most vulnerable people on

263
00:13:03,579 --> 00:13:00,170

the planet they're over 50s what do they

264

00:13:05,139 --> 00:13:03,589

do view about 10 years ago I went back

265

00:13:06,939 --> 00:13:05,149

to union i did basic psychology

266

00:13:08,199 --> 00:13:06,949

advertising English just because i

267

00:13:09,970 --> 00:13:08,209

thought i would like to learn about

268

00:13:12,550 --> 00:13:09,980

those things so really all that means as

269

00:13:15,429 --> 00:13:12,560

i know i've got the books but i know i'm

270

00:13:19,470 --> 00:13:15,439

good at looking things up i could read

271

00:13:23,079 --> 00:13:19,480

ads so I open the book page after page

272

00:13:25,929 --> 00:13:23,089

herbal remedy for sex for you know for

273

00:13:29,230 --> 00:13:25,939

knees for joints all famous page and

274

00:13:31,720 --> 00:13:29,240

page and then page after page of miracle

275

00:13:33,670 --> 00:13:31,730

cure for cancer by this net repair for

276

00:13:35,079 --> 00:13:33,680

this cancer for that and then products

277

00:13:37,679 --> 00:13:35,089

that clearly defied physics and

278

00:13:40,960 --> 00:13:37,689

physiology I saw this this isn't right

279

00:13:43,480 --> 00:13:40,970

so I email the food and drugs

280

00:13:46,509 --> 00:13:43,490

illustration about one product and I

281

00:13:47,949 --> 00:13:46,519

started researching stuff compile the

282

00:13:49,929 --> 00:13:47,959

great little lesson you know saying that

283

00:13:52,540 --> 00:13:49,939

these things that this is the proof this

284

00:13:55,480 --> 00:13:52,550

is the information sent it into them and

285

00:13:58,990 --> 00:13:55,490

of course what did they do yeah yeah

286

00:14:01,170 --> 00:13:59,000

nothing and at that time I went to my

287

00:14:03,910 --> 00:14:01,180

oncologist I had a meeting with her and

288

00:14:05,829 --> 00:14:03,920

she said what are you doing Loretta and

289

00:14:08,920 --> 00:14:05,839

I said you know I said I'm trying to

290

00:14:11,379 --> 00:14:08,930

fight yeah like a probably 20 billion

291

00:14:13,179 --> 00:14:11,389

dollar industry on my own and I said

292

00:14:16,210 --> 00:14:13,189

it's get me down a bit I'm just feeling

293

00:14:19,360 --> 00:14:16,220

a bit fragile I think I'm going to give

294

00:14:21,460 --> 00:14:19,370

up she said don't give up Loretta you'd

295

00:14:24,610 --> 00:14:21,470

be surprised how much power one person

296

00:14:26,860 --> 00:14:24,620

has so I went home turn on the computer

297

00:14:30,460 --> 00:14:26,870

and I read you just a little bit of this

298

00:14:33,850 --> 00:14:30,470

because I was really angry and I thought

299

00:14:37,569 --> 00:14:33,860

right I just started off very festively

300

00:14:39,429 --> 00:14:37,579

as I am we I demand you apologize to all

301
00:14:41,170 --> 00:14:39,439
your members and this is a couple of

302
00:14:43,900 --> 00:14:41,180
things not only do you print ads for

303
00:14:45,549 --> 00:14:43,910
cracks natural pest quackery pulls the

304
00:14:47,679 --> 00:14:45,559
sex and weight loss and the possibility

305
00:14:49,840 --> 00:14:47,689
of some pesticide thrown in for good

306
00:14:51,340 --> 00:14:49,850
measure and banned products but your

307
00:14:53,379 --> 00:14:51,350
policies even prevent quality

308
00:14:56,439 --> 00:14:53,389
information being made available to your

309
00:14:58,059 --> 00:14:56,449
computer literate readers and I had

310
00:15:00,220 --> 00:14:58,069
asked the computer section to put in our

311
00:15:02,650 --> 00:15:00,230
timers and tinnitus links for some new

312
00:15:04,600 --> 00:15:02,660
revolution II and they said throw this

313
00:15:07,799 --> 00:15:04,610

is for fun I'm not a lot of health stuff

314

00:15:09,939 --> 00:15:07,809

in and this guy was a retired pharmacist

315

00:15:11,710 --> 00:15:09,949

and I ended it I think you should

316

00:15:13,720 --> 00:15:11,720

apologize your membership for their lost

317

00:15:15,309 --> 00:15:13,730

opportunities to give them advice and

318

00:15:17,319 --> 00:15:15,319

hope for their quality of life now and

319

00:15:19,269 --> 00:15:17,329

in the future and for the total lack of

320

00:15:21,009 --> 00:15:19,279

understanding in peddling snake oil

321

00:15:22,869 --> 00:15:21,019

products and services and I went and

322

00:15:24,939 --> 00:15:22,879

packed every email in that bloody

323

00:15:28,629 --> 00:15:24,949

newspaper and fax it off to the mouth

324

00:15:32,259 --> 00:15:28,639

all that I've done all I cared anyway I

325

00:15:34,090 --> 00:15:32,269

got back to me they said Loretta could

326

00:15:38,259 --> 00:15:34,100

you put an unemotional argument to the

327

00:15:39,999 --> 00:15:38,269

editor so I penetrable wait in fact I've

328

00:15:41,829 --> 00:15:40,009

ticked away pretty well up until last

329

00:15:43,389 --> 00:15:41,839

week away from the email wrote a nice

330

00:15:46,059 --> 00:15:43,399

letter that just give me a couple of

331

00:15:49,540 --> 00:15:46,069

weeks to put my argument together and my

332

00:15:51,639 --> 00:15:49,550

argument was that a lot of people over

333

00:15:54,189 --> 00:15:51,649

50 the only non financial magazine they

334

00:15:54,540 --> 00:15:54,199

get is the National seniors Association

335

00:15:56,310 --> 00:15:54,550

one

336

00:15:58,829 --> 00:15:56,320

that's all I get and they can't afford

337

00:16:01,290 --> 00:15:58,839

the six dollars for women's weekly the

338

00:16:03,630 --> 00:16:01,300

other one is that unfortunately over the

339

00:16:05,519 --> 00:16:03,640

people over fifty fifty percent of them

340

00:16:07,620 --> 00:16:05,529

have clinical evidence of Alzheimer

341

00:16:09,240 --> 00:16:07,630

that's not too bad and they've all got a

342

00:16:11,430 --> 00:16:09,250

bit of a memory problem there and all

343

00:16:13,199 --> 00:16:11,440

these things I linked to websites I'm

344

00:16:14,460 --> 00:16:13,209

also only two percent of people are

345

00:16:16,500 --> 00:16:14,470

going to have enough money to retire oh

346

00:16:21,210 --> 00:16:16,510

and I went on with all the facts and

347

00:16:23,400 --> 00:16:21,220

figures and i'm pleased to say that the

348

00:16:26,220 --> 00:16:23,410

dodgy health products are gone the

349

00:16:27,420 --> 00:16:26,230

naturopaths are gone some of the pools

350

00:16:30,300 --> 00:16:27,430

are still there but there were only two

351

00:16:35,960 --> 00:16:30,310

pages on it so one person can make a

352

00:16:40,050 --> 00:16:38,519

I'd rather get a big gun know about this

353

00:16:42,259 --> 00:16:40,060

because you know Geraldine I've got

354

00:16:45,090 --> 00:16:42,269

something to boast to that gives a damn

355

00:16:47,160 --> 00:16:45,100

the local new page that had the detox

356

00:16:49,139 --> 00:16:47,170

pads you know not not the proper ones

357

00:16:50,430 --> 00:16:49,149

but those artificial one said you know

358

00:16:53,340 --> 00:16:50,440

they put out the front of the net

359

00:16:56,340 --> 00:16:53,350

repairs places and so I attached a

360

00:17:00,060 --> 00:16:56,350

triple c letter that said the a trip

361

00:17:01,949 --> 00:17:00,070

will see is seeking to keeping an eye on

362

00:17:04,049 --> 00:17:01,959

the media that's exploiting the

363

00:17:06,659 --> 00:17:04,059

vulnerable and that's why i always put

364

00:17:09,270 --> 00:17:06,669

senior on everything because seniors I

365

00:17:13,710 --> 00:17:09,280

seem to be vulnerable whereas adults out

366

00:17:14,939 --> 00:17:13,720

for some reason so I tell people seniors

367

00:17:16,290 --> 00:17:14,949

you know if it's not to achieve

368

00:17:18,740 --> 00:17:16,300

grandmother but everything I've written

369

00:17:21,150 --> 00:17:18,750

is for anybody else anyways complaint

370

00:17:23,069 --> 00:17:21,160

and he wrote back thank you for bringing

371

00:17:25,290 --> 00:17:23,079

the advertisement to our attention we

372

00:17:27,090 --> 00:17:25,300

will certainly not be accepting any

373

00:17:33,030 --> 00:17:27,100

further advertising from this particular

374

00:17:35,730 --> 00:17:33,040

person I thought you champion one person

375

00:17:38,100 --> 00:17:35,740

can make a difference now the thing

376

00:17:40,080 --> 00:17:38,110

about teams right just don't like to

377

00:17:42,120 --> 00:17:40,090

mention the team business but the

378

00:17:44,760 --> 00:17:42,130

skeptics have a reputation that the

379

00:17:46,950 --> 00:17:44,770

world's worst team people there's three

380

00:17:48,750 --> 00:17:46,960

thousand of you all doing three thousand

381

00:17:50,490 --> 00:17:48,760

different things and no one wants to

382

00:17:53,730 --> 00:17:50,500

help the guy on the left or the right

383

00:17:55,820 --> 00:17:53,740

and it the skeptics will readily admit

384

00:17:58,470 --> 00:17:55,830

that but I want to put this on record

385

00:18:00,360 --> 00:17:58,480

that's from the first day of my journey

386

00:18:02,640 --> 00:18:00,370

where I'm wobbling along on my bike with

387

00:18:05,640 --> 00:18:02,650

the training wheels Barry was there

388

00:18:06,820 --> 00:18:05,650

hanging on the back giving me advice and

389

00:18:09,759 --> 00:18:06,830

guidance in the tea

390

00:18:12,100 --> 00:18:09,769

were there pushing me along and then

391

00:18:14,500 --> 00:18:12,110

when finally I was going good it's not

392

00:18:16,600 --> 00:18:14,510

bad they were cheering and clapping and

393

00:18:18,070 --> 00:18:16,610

telling me to go I could not have I

394

00:18:20,380 --> 00:18:18,080

would not have had the self-confidence

395

00:18:22,570 --> 00:18:20,390

to do what I have done today if it

396

00:18:26,380 --> 00:18:22,580

wasn't for Barry dr. Richard Gordon

397

00:18:29,769 --> 00:18:26,390

Richard Saunders Geraldine Moses Bob

398

00:18:31,330 --> 00:18:29,779

Bruce lily and Derek Laurie Eddie and if

399

00:18:34,870 --> 00:18:31,340

you have quite a few others i don't even

400

00:18:37,870 --> 00:18:34,880

know who took the time to email me or to

401
00:18:39,070 --> 00:18:37,880
complain about something else the one

402
00:18:42,190 --> 00:18:39,080
thing about complaining i will mention

403
00:18:46,180 --> 00:18:42,200
women love complaining going girls

404
00:18:48,970 --> 00:18:46,190
complaining or right and that's how I

405
00:18:52,090 --> 00:18:48,980
got the name the power of one if me and

406
00:18:54,610 --> 00:18:52,100
a tiny team can achieve so much just

407
00:18:56,799 --> 00:18:54,620
imagine how much we could do if a few

408
00:18:59,680 --> 00:18:56,809
more of you got on and just in anything

409
00:19:04,899 --> 00:18:59,690
even positive thoughts will help and

410
00:19:07,240 --> 00:19:04,909
that's why I put this out now curious if

411
00:19:08,980 --> 00:19:07,250
I put that one this was the photo taken

412
00:19:12,190 --> 00:19:08,990
now what have I achieved ok apart from

413
00:19:15,669 --> 00:19:12,200

that I will shortly be featured in new

414

00:19:17,289 --> 00:19:15,679

idea I'm not sure when and they took a

415

00:19:18,639 --> 00:19:17,299

bit of all these photos on me this is

416

00:19:21,190 --> 00:19:18,649

the best one I thought to the last photo

417

00:19:24,250 --> 00:19:21,200

ever want taken I look quite good in it

418

00:19:26,980 --> 00:19:24,260

and I thought what can I do can i

419

00:19:30,100 --> 00:19:26,990

approach new idea about putting in

420

00:19:33,070 --> 00:19:30,110

something in gb places in surgeries to

421

00:19:34,539 --> 00:19:33,080

let patients do their own research the

422

00:19:38,560 --> 00:19:34,549

one thing i am good at is being a

423

00:19:42,279 --> 00:19:38,570

patient other thing too Australian

424

00:19:46,930 --> 00:19:42,289

doctor now holy GPS get australian GP CA

425

00:19:56,750 --> 00:19:46,940

and dr. jun 17 check your copy the very

426
00:20:01,590 --> 00:19:59,430
and that comes from nagging McCracken

427
00:20:05,279 --> 00:20:01,600
emailing people but unnecessarily about

428
00:20:08,450 --> 00:20:05,289
the skills that I have now it just have

429
00:20:12,150 --> 00:20:08,460
a quick story about the magnetic story

430
00:20:14,430 --> 00:20:12,160
Geraldine as I say I keep t6 in my life

431
00:20:17,970 --> 00:20:14,440
and attend different places I first got

432
00:20:19,529 --> 00:20:17,980
to know when they did the booklet and I

433
00:20:22,169 --> 00:20:19,539
thought I was so smart I thought all

434
00:20:24,720 --> 00:20:22,179
right a booklet I chose you i think i

435
00:20:27,870 --> 00:20:24,730
was on the drugs in or something and I

436
00:20:31,140 --> 00:20:27,880
thought I've got to adverse events look

437
00:20:33,570 --> 00:20:31,150
as a person you can talk to a person I

438
00:20:36,360 --> 00:20:33,580

bad drugs awesome how good is that a

439

00:20:38,490 --> 00:20:36,370

person and I so good it contact us I

440

00:20:40,140 --> 00:20:38,500

thought there's a line it's in Brisbane

441

00:20:43,740 --> 00:20:40,150

you can actually bring somebody up

442

00:20:46,440 --> 00:20:43,750

that's a fantastic anyway so I thought

443

00:20:49,049 --> 00:20:46,450

I'll ask permission and you can see it's

444

00:20:51,690 --> 00:20:49,059

in why it's so important to me talk to a

445

00:20:53,940 --> 00:20:51,700

person so I did so I got on to someone

446

00:20:55,590 --> 00:20:53,950

they said I said can I use the adverse

447

00:20:58,430 --> 00:20:55,600

event stuff you love to talk to

448

00:21:01,110 --> 00:20:58,440

Geraldine Moses that woman on the radio

449

00:21:03,180 --> 00:21:01,120

so I ringing up Geraldine and I say you

450

00:21:04,950 --> 00:21:03,190

know trying to sound like I'm spooked a

451
00:21:08,310 --> 00:21:04,960
bit she says what's the objective of you

452
00:21:10,770 --> 00:21:08,320
booklet Oh to help seniors get in make

453
00:21:12,960 --> 00:21:10,780
informed choices on Orthodox and

454
00:21:14,850 --> 00:21:12,970
complementary and alternative I thought

455
00:21:18,210 --> 00:21:14,860
Stan freeze that she said what do you

456
00:21:19,500 --> 00:21:18,220
know about cam I said nothing I said I

457
00:21:22,980 --> 00:21:19,510
direct the mall to the skeptics

458
00:21:26,010 --> 00:21:22,990
dictionary 64 million dollar answer

459
00:21:27,450 --> 00:21:26,020
after that Geraldine couldn't do enough

460
00:21:29,070 --> 00:21:27,460
to help the woman is right in the

461
00:21:31,590 --> 00:21:29,080
Fleming thesis she's got a one year old

462
00:21:34,770 --> 00:21:31,600
kid she takes a booklet I'm very black

463
00:21:37,260 --> 00:21:34,780

and white she softened it fixed it she

464

00:21:40,950 --> 00:21:37,270

hasn't got rid of me since we're still

465

00:21:43,140 --> 00:21:40,960

doing juro right and that was her and I

466

00:21:45,480 --> 00:21:43,150

thank you for doing that and even all

467

00:21:47,010 --> 00:21:45,490

right the magnetic therapy I tell

468

00:21:48,919 --> 00:21:47,020

Geraldine should know me at a party I'm

469

00:21:51,570 --> 00:21:48,929

wandering around after people's magnets

470

00:21:58,169 --> 00:21:51,580

and this is the wonderful device itself

471

00:22:00,330 --> 00:21:58,179

who my beloved gas meter people have

472

00:22:02,490 --> 00:22:00,340

admitted even my friends right the best

473

00:22:03,940 --> 00:22:02,500

thing with my friends when I decided I

474

00:22:07,419 --> 00:22:03,950

was going to prove make

475

00:22:09,759 --> 00:22:07,429

character with they said to me

476
00:22:12,970 --> 00:22:09,769
after several attempts to show them as i

477
00:22:14,590 --> 00:22:12,980
mentioned in my articles they said all

478
00:22:16,299 --> 00:22:14,600
right Loretta we believe you and I leave

479
00:22:18,370 --> 00:22:16,309
your bloody magnets at home and i

480
00:22:21,730 --> 00:22:18,380
thought no i never did but that was

481
00:22:24,070 --> 00:22:21,740
enough from my friends to prove that it

482
00:22:28,509 --> 00:22:24,080
I could show them that they were being

483
00:22:31,810 --> 00:22:28,519
defrauded that the jellybean under life

484
00:22:34,029 --> 00:22:31,820
I prepared these for Gerald to show

485
00:22:36,100 --> 00:22:34,039
Geraldine but they weren't like this

486
00:22:38,680 --> 00:22:36,110
there are two raggy bits of material

487
00:22:41,320 --> 00:22:38,690
stapled together and I had them ready to

488
00:22:43,960 --> 00:22:41,330

show up on the day will mention this

489

00:22:46,210 --> 00:22:43,970

went with the first recorded ESP ever in

490

00:22:49,000 --> 00:22:46,220

history Geraldine 12 months before it

491

00:22:52,570 --> 00:22:49,010

give me a phone number and I had worked

492

00:22:54,250 --> 00:22:52,580

in public service i fathered one day my

493

00:22:56,680 --> 00:22:54,260

phone was out a week and I'd tell gel

494

00:22:57,879 --> 00:22:56,690

deny was going to drop in that day so I

495

00:22:59,620 --> 00:22:57,889

think the conversation went something

496

00:23:02,950 --> 00:22:59,630

like that and I had these to show her

497

00:23:05,710 --> 00:23:02,960

and I said ring ring hello Geraldine

498

00:23:07,629 --> 00:23:05,720

it's Loretta what are you ringing me as

499

00:23:09,490 --> 00:23:07,639

he hears something noon you got me

500

00:23:11,200 --> 00:23:09,500

ringing meet the farming year I said no

501
00:23:20,190 --> 00:23:11,210
I'm we were no offense Martin I said

502
00:23:26,740 --> 00:23:23,769
sure this is I said to tell you I can't

503
00:23:29,590 --> 00:23:26,750
make it to where I'm at the University

504
00:23:32,440 --> 00:23:29,600
and I said why are you ringing media she

505
00:23:34,330 --> 00:23:32,450
said Britain extra what you on and she

506
00:23:36,399 --> 00:23:34,340
said what to do it I said I would walk

507
00:23:38,680 --> 00:23:36,409
on broken glass to do that presentation

508
00:23:42,730 --> 00:23:38,690
and she said well that sounds okay all

509
00:23:45,279 --> 00:23:42,740
right anyway so I managed in this next

510
00:23:47,409 --> 00:23:45,289
few days to delay them so I could look

511
00:23:50,620 --> 00:23:47,419
like I knew what I was doing I'm Irish

512
00:23:54,279 --> 00:23:50,630
run I had the jar I had the jellybeans

513
00:23:57,250 --> 00:23:54,289

and alone and Australian jellybean

514

00:23:59,320 --> 00:23:57,260

handle a and there's the real one

515

00:24:01,269 --> 00:23:59,330

there's a jellybean one I hide them and

516

00:24:03,190 --> 00:24:01,279

I do demos and for some reason everybody

517

00:24:06,190 --> 00:24:03,200

has always picked the jelly bean I'm

518

00:24:07,779 --> 00:24:06,200

delay in my surgeon thing that one I saw

519

00:24:11,320 --> 00:24:07,789

the needle flickr that one and I don't

520

00:24:13,149 --> 00:24:11,330

know I oh sorry and the and they

521

00:24:15,240 --> 00:24:13,159

actually better because if stood out

522

00:24:18,030 --> 00:24:15,250

what you can eat them huh

523

00:24:19,620 --> 00:24:18,040

and they have no side effects so that as

524

00:24:21,060 --> 00:24:19,630

I say was an emergency rest of my

525

00:24:25,320 --> 00:24:21,070

girlfriend's hair so she could throw up

526
00:24:26,970 --> 00:24:25,330
these for the presentation later on not

527
00:24:29,240 --> 00:24:26,980
too much later on i'll be showing the

528
00:24:33,300 --> 00:24:29,250
video and we can go through that widget

529
00:24:35,520 --> 00:24:33,310
we've got time for that yes now dr. Lisa

530
00:24:37,290 --> 00:24:35,530
laakso is over here she features she's

531
00:24:38,970 --> 00:24:37,300
the good-looking one in the video and

532
00:24:54,720 --> 00:24:38,980
this is the nose we'll be looking up in

533
00:24:57,660 --> 00:24:54,730
a minute so here yes no volume family is

534
00:24:58,980 --> 00:24:57,670
magnetic therapy Lisa honey balls be

535
00:25:01,310 --> 00:24:58,990
looking at the products that are

536
00:25:03,510 --> 00:25:01,320
available and whether they do work

537
00:25:05,580 --> 00:25:03,520
magnetic therapy there are the young

538
00:25:07,380 --> 00:25:05,590

delays I said when you're receiving the

539

00:25:10,140 --> 00:25:07,390

benefits every single night the spa

540

00:25:12,030 --> 00:25:10,150

treatments the isolating particular

541

00:25:14,970 --> 00:25:12,040

point very whether it's a neat wrist

542

00:25:18,060 --> 00:25:14,980

elbow ankle the faithful you to feel so

543

00:25:20,760 --> 00:25:18,070

much better haiyan go and the nuggets

544

00:25:22,230 --> 00:25:20,770

people are not being told the truth for

545

00:25:25,230 --> 00:25:22,240

years there's been a hard sell on

546

00:25:27,300 --> 00:25:25,240

magnets to treat pain crane Trinder says

547

00:25:29,790 --> 00:25:27,310

he brought the therapy to Australia a

548

00:25:33,000 --> 00:25:29,800

formal own of ivory so he says he broke

549

00:25:35,700 --> 00:25:33,010

30 bones and her back and speak ears on

550

00:25:38,040 --> 00:25:35,710

drugs before trying magnets in the US

551
00:25:40,310 --> 00:25:38,050
not three days and I was the difference

552
00:25:43,290 --> 00:25:40,320
in the pain relief and then after about

553
00:25:46,650 --> 00:25:43,300
15 days Toby Hall is just incredible

554
00:25:48,450 --> 00:25:46,660
Frances he sold 300,000 products in

555
00:25:50,940 --> 00:25:48,460
starting gold coast-based company

556
00:25:53,090 --> 00:25:50,950
biomagnetic and he happily presents

557
00:25:56,490 --> 00:25:53,100
customers who saved that would be works

558
00:25:59,040 --> 00:25:56,500
carpal tunnel and it kept me away from

559
00:26:01,680 --> 00:25:59,050
not prevented me from using my hands and

560
00:26:02,460 --> 00:26:01,690
within two weeks I was feeling right

561
00:26:04,620 --> 00:26:02,470
from a knife

562
00:26:08,520 --> 00:26:04,630
move in six weeks I was able to get up

563
00:26:11,909 --> 00:26:08,530

up up out of bed and move around I was a

564

00:26:14,480 --> 00:26:11,919

16 year old go fix don't fire or lose

565

00:26:17,460 --> 00:26:14,490

any fertile statements are not evidence

566

00:26:20,100 --> 00:26:17,470

the red American calls herself the jelly

567

00:26:24,950 --> 00:26:20,110

bean lately she's on a campaign to prove

568

00:26:30,899 --> 00:26:28,890

many mothers with small children who

569

00:26:33,480 --> 00:26:30,909

have boxful bruises you give them a

570

00:26:35,460 --> 00:26:33,490

jelly bean they're instantly chilled and

571

00:26:37,680 --> 00:26:35,470

that's just a placebo of it and the

572

00:26:40,140 --> 00:26:37,690

placebo effect is what Loretta believes

573

00:26:42,840 --> 00:26:40,150

is at play when people find magnetic

574

00:26:45,090 --> 00:26:42,850

therapy working she says many consumers

575

00:26:47,159 --> 00:26:45,100

get no benefit but you don't hear them

576

00:26:49,289 --> 00:26:47,169

number of people that I know that are

577

00:26:51,240 --> 00:26:49,299

bought some of these magnetic products

578

00:26:54,240 --> 00:26:51,250

they have put them in their cupboards

579

00:26:56,480 --> 00:26:54,250

and put them on a braided my Loretta so

580

00:26:59,039 --> 00:26:56,490

passionate well she had breast cancer

581

00:27:01,350 --> 00:26:59,049

prompting her to investigate treatments

582

00:27:03,690 --> 00:27:01,360

for chronic illnesses she has a maths

583

00:27:05,970 --> 00:27:03,700

and physics degree so she looks for

584

00:27:08,789 --> 00:27:05,980

evidence which she says is severely

585

00:27:11,130 --> 00:27:08,799

lacking when it comes to magnets the

586

00:27:13,560 --> 00:27:11,140

people I represent the cancer patients

587

00:27:17,220 --> 00:27:13,570

and seniors and they really don't have

588

00:27:19,140 --> 00:27:17,230

the money to be buying recibo product so

589

00:27:21,659 --> 00:27:19,150

where does all this leave the people in

590

00:27:23,730 --> 00:27:21,669

the middle consumers salespeople one

591

00:27:26,010 --> 00:27:23,740

science sceptics of the other can be

592

00:27:28,529 --> 00:27:26,020

tough making an informed decision well

593

00:27:30,990 --> 00:27:28,539

science is trying to give us conclusive

594

00:27:33,510 --> 00:27:31,000

answers well we've always be a lot of

595

00:27:35,640 --> 00:27:33,520

investment in my own money in it it will

596

00:27:38,010 --> 00:27:35,650

do seem to suggest that it helps them so

597

00:27:39,779 --> 00:27:38,020

we need to find out whether in Baptism

598

00:27:42,419 --> 00:27:39,789

and how it does it in a griffith

599

00:27:44,640 --> 00:27:42,429

university studies strong flux magnets

600

00:27:46,940 --> 00:27:44,650

are being placed directly on the skin of

601
00:27:49,500 --> 00:27:46,950
people with tennis elbow pain

602
00:27:52,080 --> 00:27:49,510
indications are the perhaps there wasn't

603
00:27:53,970 --> 00:27:52,090
a bit perhaps that effect is not a nerve

604
00:27:55,799 --> 00:27:53,980
based response perhaps there's something

605
00:27:59,630 --> 00:27:55,809
else that's happening and that's what we

606
00:28:01,310 --> 00:27:59,640
have to go on to test so far only a hand

607
00:28:03,950 --> 00:28:01,320
what patients have been studied and

608
00:28:06,650 --> 00:28:03,960
researchers admit measuring pain levels

609
00:28:08,510 --> 00:28:06,660
scientifically is proving tough pretty

610
00:28:10,040 --> 00:28:08,520
frustrating because I'm not sure at this

611
00:28:12,650 --> 00:28:10,050
point in time that we have a technology

612
00:28:14,870 --> 00:28:12,660
actually your wife xserve are actually

613
00:28:17,060 --> 00:28:14,880

occurring as they persevere the

614

00:28:19,040 --> 00:28:17,070

Australian consumers association says

615

00:28:22,040 --> 00:28:19,050

it's found no conclusive scientific

616

00:28:24,440 --> 00:28:22,050

evidence to support magnets but nothing

617

00:28:27,020 --> 00:28:24,450

either to say they're harmful except

618

00:28:28,820 --> 00:28:27,030

maybe to the hip pocket these underlays

619

00:28:31,520 --> 00:28:28,830

sell for two hundred and ninety-nine

620

00:28:33,440 --> 00:28:31,530

dollars for a queen made Craig started

621

00:28:35,990 --> 00:28:33,450

out offering money back guarantees but

622

00:28:37,940 --> 00:28:36,000

doesn't now though studies on I can

623

00:28:40,520 --> 00:28:37,950

comment on it the Consumers Association

624

00:28:42,620 --> 00:28:40,530

advises people try and magnetic therapy

625

00:28:45,320 --> 00:28:42,630

to look for products with money back

626
00:28:47,900 --> 00:28:45,330
guarantees and the jelly bean lady well

627
00:28:49,820 --> 00:28:47,910
she has her own suggestion I think if

628
00:28:51,590 --> 00:28:49,830
you want to try them it may medic

629
00:29:09,209 --> 00:28:51,600
therapy home just grab a fridge magnet

630
00:29:13,839 --> 00:29:11,349
examining the truth in exposing the

631
00:29:15,699 --> 00:29:13,849
frauds but psychics co uk is the website

632
00:29:17,799 --> 00:29:15,709
that critically examines mediums

633
00:29:19,629 --> 00:29:17,809
clairvoyants and psychics follow the

634
00:29:21,699 --> 00:29:19,639
controversies news and discussions in

635
00:29:23,229 --> 00:29:21,709
the lively forum community and now you

636
00:29:24,909 --> 00:29:23,239
can download your weekly fix of

637
00:29:27,279 --> 00:29:24,919
righteous indignation the official

638
00:29:28,539 --> 00:29:27,289

podcast of bad psychics khodet UK that

639

00:29:31,659 --> 00:29:28,549

talks hard and critically about

640

00:29:33,029 --> 00:29:31,669

paranormal bad psychics khodet UK the

641

00:29:44,619 --> 00:29:33,039

UK's largest and most respected

642

00:29:46,359 --> 00:29:44,629

skeptical site looking at psychics it's

643

00:29:48,849 --> 00:29:46,369

a Richard Saunders here with dr. Rachel

644

00:29:51,449 --> 00:29:48,859

Dunlop we're walking down King Street in

645

00:29:54,159 --> 00:29:51,459

Newtown Newtown the suburb in Sydney and

646

00:29:57,729 --> 00:29:54,169

Rachel do we actually ever relax from

647

00:30:00,129 --> 00:29:57,739

this no because we had although can I

648

00:30:01,509 --> 00:30:00,139

just say we just saw a really been roll

649

00:30:03,819 --> 00:30:01,519

down the street though which was quite

650

00:30:05,589 --> 00:30:03,829

amusing it was in the middle of the road

651
00:30:07,149 --> 00:30:05,599
and it's a main road we're stuck behind

652
00:30:09,099 --> 00:30:07,159
the truck and the truck drove off in the

653
00:30:10,440 --> 00:30:09,109
bin quality yes very sweet it went

654
00:30:13,959 --> 00:30:10,450
through the intersection and everything

655
00:30:16,060 --> 00:30:13,969
perfect so we just had a nice lunch and

656
00:30:18,279 --> 00:30:16,070
a chat and then we decided to check out

657
00:30:21,009 --> 00:30:18,289
some pharmacies we did we'd and we had a

658
00:30:23,229 --> 00:30:21,019
bit of a win and a massive fail yes we

659
00:30:25,810 --> 00:30:23,239
did well we had a win Richard because we

660
00:30:28,299 --> 00:30:25,820
went into a big pharmacy and it stopped

661
00:30:31,539 --> 00:30:28,309
from floor to ceiling with supplements

662
00:30:32,859 --> 00:30:31,549
and way powders and all kinds of stuff

663
00:30:33,970 --> 00:30:32,869

that from which there's not much

664

00:30:36,039 --> 00:30:33,980

evidence but at least

665

00:30:38,049 --> 00:30:36,049

there's stuff in it you know unlike

666

00:30:40,000 --> 00:30:38,059

homeopathy and we asked if they had

667

00:30:41,950 --> 00:30:40,010

homeopathy and she looked at us

668

00:30:43,780 --> 00:30:41,960

physically and said no we don't have it

669

00:30:46,780 --> 00:30:43,790

and we looked at each other and thought

670

00:30:48,820 --> 00:30:46,790

what yeah and she said which product do

671

00:30:52,180 --> 00:30:48,830

you want and we we were a bit shocked we

672

00:30:54,430 --> 00:30:52,190

just said we don't I didn't really know

673

00:30:56,620 --> 00:30:54,440

what to say because I've never had

674

00:30:59,919 --> 00:30:56,630

someone in a pharmacy tell me they don't

675

00:31:01,840 --> 00:30:59,929

have homeopathy so we was thought oh

676
00:31:04,360 --> 00:31:01,850
that's all right and we said well that's

677
00:31:06,010 --> 00:31:04,370
good we're glad you don't we went around

678
00:31:08,640 --> 00:31:06,020
out of the street walked a couple

679
00:31:10,500 --> 00:31:08,650
hundred meters

680
00:31:13,670 --> 00:31:10,510
as the cars go by we're just stuck into

681
00:31:17,310 --> 00:31:13,680
the street here it might be better oh

682
00:31:21,330 --> 00:31:17,320
this is the street where you work that's

683
00:31:23,910 --> 00:31:21,340
better and so we walk down to another

684
00:31:25,530 --> 00:31:23,920
pharmacy hmm and because you wanted to

685
00:31:28,200 --> 00:31:25,540
check out what it said on the packet

686
00:31:29,910 --> 00:31:28,210
packets of homeopathy yeah because we

687
00:31:32,400 --> 00:31:29,920
had an email from a listener who said

688
00:31:34,680 --> 00:31:32,410

that it says on the side of the boxes

689

00:31:37,350 --> 00:31:34,690

active ingredient and then at least as

690

00:31:40,530 --> 00:31:37,360

lists the ingredients but with their

691

00:31:43,800 --> 00:31:40,540

dilutions so essentially that should say

692

00:31:47,820 --> 00:31:43,810

active ingredients none yeah so we just

693

00:31:49,560 --> 00:31:47,830

wanted to confirm this so that's right

694

00:31:51,360 --> 00:31:49,570

we walked in or just studying the boxes

695

00:31:52,770 --> 00:31:51,370

and the friendly assistant from the

696

00:31:58,200 --> 00:31:52,780

front desk came up and said can I help

697

00:31:59,670 --> 00:31:58,210

you etc etc and then you said we noticed

698

00:32:03,210 --> 00:31:59,680

there's homeopathy their four children

699

00:32:06,450 --> 00:32:03,220

pain and fever and this sort of thing so

700

00:32:08,460 --> 00:32:06,460

we acquired you said to her does this

701
00:32:10,770 --> 00:32:08,470
work do you think of work she said oh

702
00:32:13,260 --> 00:32:10,780
yes it works because our customers keep

703
00:32:14,670 --> 00:32:13,270
coming back and telling us it works so

704
00:32:17,760 --> 00:32:14,680
we thought up

705
00:32:19,410 --> 00:32:17,770
it's a bit of a fail then I tried to

706
00:32:23,010 --> 00:32:19,420
explain to her that that's just anecdote

707
00:32:25,260 --> 00:32:23,020
and she and you said you know what

708
00:32:27,630 --> 00:32:25,270
homeopathy is and her answer was I guess

709
00:32:29,130 --> 00:32:27,640
it's all natural and herbs yeah and then

710
00:32:31,050 --> 00:32:29,140
she pointed to the side of the box where

711
00:32:34,320 --> 00:32:31,060
it said active ingredients and she said

712
00:32:38,040 --> 00:32:34,330
look it says and it said arnica 30 see

713
00:32:40,590 --> 00:32:38,050

this was arnica and not baby stopped and

714

00:32:43,490 --> 00:32:40,600

I said yeah that means it's diluted 10

715

00:32:45,620 --> 00:32:43,500

to the negative 30 times

716

00:32:47,570 --> 00:32:45,630

and she said I'd still there still there

717

00:32:49,250 --> 00:32:47,580

at work they tell me it works they tell

718

00:32:51,170 --> 00:32:49,260

me yeah yeah she hadn't got a clue what

719

00:32:53,750 --> 00:32:51,180

we were talking about and then I said

720

00:32:56,750 --> 00:32:53,760

but you know that people report that the

721

00:32:58,670 --> 00:32:56,760

placebo works too missioner o response

722

00:33:00,980 --> 00:32:58,680

was just priceless this is a woman

723

00:33:03,620 --> 00:33:00,990

working in a pharmacy selling medicine

724

00:33:07,670 --> 00:33:03,630

she said oh I don't know what a placebo

725

00:33:09,920 --> 00:33:07,680

is that's above my head yeah fail yeah

726

00:33:11,990 --> 00:33:09,930

you don't even know what the placebo

727

00:33:13,670 --> 00:33:12,000

effect is yeah and when I suggested that

728

00:33:15,740 --> 00:33:13,680

it might be dangerous to give my child

729

00:33:18,500 --> 00:33:15,750

something that has nothing in it instead

730

00:33:20,510 --> 00:33:18,510

of perhaps paracetamol or coding she

731

00:33:23,870 --> 00:33:20,520

said oh no no they say it works they say

732

00:33:25,820 --> 00:33:23,880

it works yeah so so pharmacies of New

733

00:33:28,280 --> 00:33:25,830

South Wales what are you doing so and

734

00:33:30,790 --> 00:33:28,290

and I just wanted to point out that when

735

00:33:33,020 --> 00:33:30,800

I worked in a restaurant as a waitress I

736

00:33:34,850 --> 00:33:33,030

had to know everything that was in the

737

00:33:36,620 --> 00:33:34,860

food that I was serving two people I had

738

00:33:38,270 --> 00:33:36,630

to know whether there was nuts in it

739

00:33:41,030 --> 00:33:38,280

whether there was gluten in it where

740

00:33:44,690 --> 00:33:41,040

there was weight in it even just where

741

00:33:46,310 --> 00:33:44,700

the particular ingredients came from so

742

00:33:48,680 --> 00:33:46,320

that I could give people an informed

743

00:33:51,290 --> 00:33:48,690

choice when they chose a dish to put in

744

00:33:52,740 --> 00:33:51,300

there now yeah yeah and she and this

745

00:33:55,440 --> 00:33:52,750

woman is still a

746

00:33:58,380 --> 00:33:55,450

this water to people with children with

747

00:33:59,910 --> 00:33:58,390

fever fever yeah and saying I don't know

748

00:34:02,790 --> 00:33:59,920

what a placebo is I don't know what you

749

00:34:05,040 --> 00:34:02,800

know it works inexcusable so another

750

00:34:07,290 --> 00:34:05,050

tack we seriously have to consider now

751

00:34:09,629 --> 00:34:07,300

is simple consumer affairs these

752

00:34:12,389 --> 00:34:09,639

products claim state quite clearly on

753

00:34:14,580 --> 00:34:12,399

the package contains and they don't they

754

00:34:16,169 --> 00:34:14,590

don't then I can't sell something which

755

00:34:17,970 --> 00:34:16,179

doesn't contain something what Viking

756

00:34:19,619 --> 00:34:17,980

these hold me off of this get away with

757

00:34:21,450 --> 00:34:19,629

it no I couldn't work in a restaurant

758

00:34:24,270 --> 00:34:21,460

and say i'll sell you a dozen oysters

759

00:34:25,800 --> 00:34:24,280

and then just take out the shells thank

760

00:34:28,260 --> 00:34:25,810

you dr. Richie another interesting

761

00:34:31,050 --> 00:34:28,270

adventure you're listening to the

762

00:34:33,869 --> 00:34:31,060

skeptic zone I'm Brian Dunning from

763

00:34:36,540 --> 00:34:33,879

sceptile calm when I'm not tuned into

764

00:34:39,330 --> 00:34:36,550

the skeptic zone I'm recording thus kept

765

00:34:41,220 --> 00:34:39,340

I'd podcast doing what I can to further

766

00:34:43,770 --> 00:34:41,230

knowledge by blasting away the

767

00:34:46,590 --> 00:34:43,780

widespread pseudo-sciences that infect

768

00:34:49,200 --> 00:34:46,600

popular culture I've also compiled a

769

00:34:52,290 --> 00:34:49,210

40-minute educational video on critical

770

00:34:56,040 --> 00:34:52,300

thinking called here be dragons at here

771

00:34:58,680 --> 00:34:56,050

be dragons movie.com I hope you check

772

00:35:05,010 --> 00:34:58,690

those out and I hope you enjoy the

773

00:35:10,680 --> 00:35:05,020

skeptic zone now it's time for dr.

774

00:35:16,030 --> 00:35:13,300

hello everyone and welcome to dr. Reggie

775

00:35:17,980 --> 00:35:16,040

reports regular listeners would recall

776

00:35:19,750 --> 00:35:17,990

that I recently attended a conference on

777

00:35:23,320 --> 00:35:19,760

the Gold Coast called the International

778

00:35:25,570 --> 00:35:23,330

proteolysis society here I spoke to

779

00:35:28,600 --> 00:35:25,580

several scientists one of whom I present

780

00:35:30,580 --> 00:35:28,610

this week dr. Sheena McGowan is a

781

00:35:33,550 --> 00:35:30,590

structural biologist from Monash

782

00:35:35,770 --> 00:35:33,560

University in Melbourne Sheena's primary

783

00:35:37,870 --> 00:35:35,780

area of research is malaria and in

784

00:35:41,109 --> 00:35:37,880

particular designing new drugs to combat

785

00:35:43,150 --> 00:35:41,119

the parasite malaria is a health crisis

786

00:35:45,609 --> 00:35:43,160

in the developing world with statistics

787

00:35:48,580 --> 00:35:45,619

showing that one child dies every 20

788

00:35:52,390 --> 00:35:48,590

seconds from malaria and 500 million new

789

00:35:54,940 --> 00:35:52,400

cases occur every year Sheena also tells

790

00:35:56,230 --> 00:35:54,950

us about a new vaccine for malaria which

791

00:36:00,160 --> 00:35:56,240

is scheduled to be rolled out across

792

00:36:02,650 --> 00:36:00,170

Africa in 2010 something else for the

793

00:36:04,660 --> 00:36:02,660

anti-vaxxers to complain about as you'll

794

00:36:06,850 --> 00:36:04,670

hear in this interview Sheena and her

795

00:36:09,670 --> 00:36:06,860

team are using a unique and elegant way

796

00:36:12,250 --> 00:36:09,680

of targeting the parasite with new drugs

797

00:36:14,080 --> 00:36:12,260

and i'm here today with sheena McGowan

798

00:36:17,250 --> 00:36:14,090

hi Sheena how are you good thank you

799

00:36:20,500 --> 00:36:17,260

welcome to the skeptic zone we're in a

800

00:36:22,599 --> 00:36:20,510

rather tropical setting today are we for

801
00:36:24,849 --> 00:36:22,609
the international proteolysis conference

802
00:36:26,950 --> 00:36:24,859
gorgeous City to be open this year and

803
00:36:29,349 --> 00:36:26,960
apparently the pool here is quite famous

804
00:36:30,670 --> 00:36:29,359
but I haven't been down there yet you're

805
00:36:32,410 --> 00:36:30,680
going for a swim laughter this happiness

806
00:36:34,300 --> 00:36:32,420
yeah that's her I intend to go to you

807
00:36:36,340 --> 00:36:34,310
apparently I have a living right foot in

808
00:36:38,950 --> 00:36:36,350
their pool so yeah and you can swim and

809
00:36:41,230 --> 00:36:38,960
look at the fish yeah well let's talk

810
00:36:43,000 --> 00:36:41,240
science for a moment before that you're

811
00:36:44,650 --> 00:36:43,010
a structural biologist can you just

812
00:36:46,720 --> 00:36:44,660
explain to our listeners a little bit in

813
00:36:49,080 --> 00:36:46,730

brief what is a structural biologist a

814

00:36:51,400 --> 00:36:49,090

structural biologist looks at proteins

815

00:36:53,770 --> 00:36:51,410

protein structure so proteins are

816

00:36:56,109 --> 00:36:53,780

enzymes and basically all the working

817

00:36:57,660 --> 00:36:56,119

functions of the body and so what we do

818

00:37:01,260 --> 00:36:57,670

is actually determine the true

819

00:37:03,329 --> 00:37:01,270

structure and shape of proteins and from

820

00:37:06,030 --> 00:37:03,339

that what we do is infer how they work

821

00:37:07,980 --> 00:37:06,040

what function they do and for me

822

00:37:10,289 --> 00:37:07,990

personally I go on then to design drugs

823

00:37:11,730 --> 00:37:10,299

that may stop them from functioning now

824

00:37:14,069 --> 00:37:11,740

you go to be very interesting to optus

825

00:37:15,870 --> 00:37:14,079

earlier today about malaria you're

826

00:37:19,049 --> 00:37:15,880

looking in particular at designing

827

00:37:20,400 --> 00:37:19,059

drives yet reacts yell area can you just

828

00:37:23,010 --> 00:37:20,410

give Alice is a little bit of background

829

00:37:24,990 --> 00:37:23,020

about the problem like Maria malaria

830

00:37:26,549 --> 00:37:25,000

remains a global health issue in

831

00:37:28,859 --> 00:37:26,559

Australia we're very lucky at the moment

832

00:37:30,839 --> 00:37:28,869

we don't have malaria but malaria

833

00:37:33,569 --> 00:37:30,849

actually does remain a global health

834

00:37:35,760 --> 00:37:33,579

crisis so this statistics actually run

835

00:37:37,170 --> 00:37:35,770

that there's one child dies every 20

836

00:37:39,660 --> 00:37:37,180

seconds from malaria somewhere in the

837

00:37:41,849 --> 00:37:39,670

world but there's 500 million cases

838

00:37:44,370 --> 00:37:41,859

every year and from that two million

839

00:37:45,990 --> 00:37:44,380

people will die from malaria what I find

840

00:37:48,120 --> 00:37:46,000

more frightening is it half the world's

841

00:37:50,400 --> 00:37:48,130

population live at risk of contracting

842

00:37:52,680 --> 00:37:50,410

the disease and so that they're just

843

00:37:55,500 --> 00:37:52,690

huge statistics and then their mortality

844

00:37:57,990 --> 00:37:55,510

statistics it exists and mostly they're

845

00:37:59,490 --> 00:37:58,000

in developing nations but you've got to

846

00:38:01,859 --> 00:37:59,500

factor in as well but in developing

847

00:38:04,980 --> 00:38:01,869

nations malaria someone has malaria and

848

00:38:06,900 --> 00:38:04,990

they also unluckily have HIV or TV they

849

00:38:08,549 --> 00:38:06,910

get even sicker so they have a

850

00:38:11,010 --> 00:38:08,559

synergistic effect between the two

851
00:38:13,079 --> 00:38:11,020
diseases and so you have these huge

852
00:38:15,599 --> 00:38:13,089
health issues for countries that really

853
00:38:17,430 --> 00:38:15,609
can't afford to deal with them and then

854
00:38:20,039 --> 00:38:17,440
also these countries have economic

855
00:38:21,809 --> 00:38:20,049
there's an economic cost to malaria

856
00:38:23,370 --> 00:38:21,819
because their population is sick and

857
00:38:24,750 --> 00:38:23,380
they're not going to work and so if

858
00:38:26,910 --> 00:38:24,760
there's statistics at the moment say

859
00:38:28,740 --> 00:38:26,920
that any country that has a high disease

860
00:38:30,450 --> 00:38:28,750
rate of malaria will actually lose

861
00:38:31,829 --> 00:38:30,460
one-point-three percent of their

862
00:38:34,010 --> 00:38:31,839
economic growth simply because of

863
00:38:36,080 --> 00:38:34,020

malaria and for a developing country

864

00:38:37,970 --> 00:38:36,090

one-point-three percent

865

00:38:40,550 --> 00:38:37,980

huge amount for economic growth so

866

00:38:41,780 --> 00:38:40,560

controlling malaria although we think it

867

00:38:43,400 --> 00:38:41,790

might be something that you know used to

868

00:38:44,960 --> 00:38:43,410

exist and we have drugs for it and if

869

00:38:47,360 --> 00:38:44,970

you go to Thailand you take drugs for it

870

00:38:49,160 --> 00:38:47,370

it's still a major major problem within

871

00:38:50,990 --> 00:38:49,170

the country in the world so so you

872

00:38:53,510 --> 00:38:51,000

mentioned the drugs what is the current

873

00:38:55,430 --> 00:38:53,520

therapies and you also alluded to the

874

00:38:57,170 --> 00:38:55,440

rollout of a malaria vaccine there next

875

00:38:59,120 --> 00:38:57,180

year and you tell us your sighting I

876

00:39:01,040 --> 00:38:59,130

can't give you the exit exact items are

877

00:39:03,350 --> 00:39:01,050

don't remember deze there is a brand new

878

00:39:06,170 --> 00:39:03,360

malaria vaccine it's going to rolled out

879

00:39:07,670 --> 00:39:06,180

in Africa at this stage they believe it

880

00:39:09,680 --> 00:39:07,680

will be thirty percent I believe the

881

00:39:11,540 --> 00:39:09,690

numbers of thirty percent effective the

882

00:39:12,740 --> 00:39:11,550

problem with malaria is with drugs or

883

00:39:14,990 --> 00:39:12,750

vaccines and they do believe this

884

00:39:16,700 --> 00:39:15,000

vaccine we rejected is it the parasites

885

00:39:18,620 --> 00:39:16,710

are really claiming they work out a way

886

00:39:20,090 --> 00:39:18,630

to get around all her drugs and so they

887

00:39:22,340 --> 00:39:20,100

think the vaccine might last 18 months

888

00:39:24,350 --> 00:39:22,350

so although it sounds wonderful that

889

00:39:25,790 --> 00:39:24,360

there's a vaccine for most of us who do

890

00:39:27,050 --> 00:39:25,800

the research we realize we're still

891

00:39:30,350 --> 00:39:27,060

going to have to keep coming with new

892

00:39:32,390 --> 00:39:30,360

drugs malaria treatment is a combination

893

00:39:34,190 --> 00:39:32,400

therapy generally depending on where

894

00:39:37,130 --> 00:39:34,200

you've got the malaria located in the

895

00:39:39,080 --> 00:39:37,140

world just how you get treated we had

896

00:39:41,300 --> 00:39:39,090

one drug that used to be the you know

897

00:39:42,560 --> 00:39:41,310

the end drug that if you couldn't treat

898

00:39:44,780 --> 00:39:42,570

with anybody else used to go in with

899

00:39:46,220 --> 00:39:44,790

that one I think three months ago they

900

00:39:49,220 --> 00:39:46,230

reported the first resistance to that

901
00:39:51,290 --> 00:39:49,230
drug so the problem with malaria is that

902
00:39:54,920 --> 00:39:51,300
it can be treated and it can be cured

903
00:39:56,450 --> 00:39:54,930
for usually you just need constant new

904
00:39:58,010 --> 00:39:56,460
drugs because the parasite just keeps

905
00:40:00,110 --> 00:39:58,020
evolving resistance to everything that

906
00:40:00,970 --> 00:40:00,120
we throw at it and because so many

907
00:40:02,740 --> 00:40:00,980
people

908
00:40:05,200 --> 00:40:02,750
there's a lot of drugs floating around

909
00:40:07,630 --> 00:40:05,210
all through the system all the time so

910
00:40:09,490 --> 00:40:07,640
we just need basically like weaponry we

911
00:40:11,620 --> 00:40:09,500
need different treatment options to

912
00:40:12,849 --> 00:40:11,630
combat it and unfortunately for

913
00:40:14,410 --> 00:40:12,859

developing nations they need to be very

914

00:40:16,180 --> 00:40:14,420

cheap and they need to be very effective

915

00:40:17,920 --> 00:40:16,190

there's no point building a drug that's

916

00:40:19,090 --> 00:40:17,930

going to be really really costly because

917

00:40:21,220 --> 00:40:19,100

the country is can't afford to buy it

918

00:40:22,660 --> 00:40:21,230

yeah it's fine for turrets you know it's

919

00:40:24,550 --> 00:40:22,670

fine for us if we want to go to time we

920

00:40:25,930 --> 00:40:24,560

can afford to buy it but in Africa or

921

00:40:27,730 --> 00:40:25,940

South East Asia where these problems are

922

00:40:29,740 --> 00:40:27,740

endemic it needs to be really really

923

00:40:32,530 --> 00:40:29,750

cheap and really effective you mentioned

924

00:40:33,849 --> 00:40:32,540

that the parasite is very clever and so

925

00:40:36,460 --> 00:40:33,859

for that reason you're focusing on a

926

00:40:38,890 --> 00:40:36,470

very specific part of its life cycle we

927

00:40:40,870 --> 00:40:38,900

are you're looking at it's some some

928

00:40:42,940 --> 00:40:40,880

food supply and you're targeting an

929

00:40:44,800 --> 00:40:42,950

enzyme that allows it to break down

930

00:40:46,870 --> 00:40:44,810

blood you can you tell us a little bit

931

00:40:49,240 --> 00:40:46,880

about that yeah for sure so the idea on

932

00:40:50,530 --> 00:40:49,250

new drugs and this is what everyone

933

00:40:51,910 --> 00:40:50,540

around the world is focusing on the same

934

00:40:53,800 --> 00:40:51,920

thing we don't want to just another

935

00:40:55,120 --> 00:40:53,810

generation of the same thing that you

936

00:40:57,280 --> 00:40:55,130

might have a different chemical added to

937

00:40:59,380 --> 00:40:57,290

it that the malaria the parasites will

938

00:41:00,760 --> 00:40:59,390

develop resistance it quite fast what

939

00:41:03,580 --> 00:41:00,770

we're looking at now is a whole new

940

00:41:05,500 --> 00:41:03,590

target and the idea base basically being

941

00:41:07,150 --> 00:41:05,510

as if we can stop the parasite from

942

00:41:09,190 --> 00:41:07,160

eating and that's what it uses is

943

00:41:12,070 --> 00:41:09,200

hemoglobin to basically eat and that's

944

00:41:13,930 --> 00:41:12,080

its food source will start to death it's

945

00:41:15,910 --> 00:41:13,940

a very simple concept so these two

946

00:41:18,820 --> 00:41:15,920

enzymes that we focus on are the very

947

00:41:20,890 --> 00:41:18,830

final stages of its food cycle as such

948

00:41:22,780 --> 00:41:20,900

it breaks down hemoglobin which is found

949

00:41:24,820 --> 00:41:22,790

in red blood cells through very

950

00:41:26,410 --> 00:41:24,830

complicated process but at the very end

951
00:41:28,090 --> 00:41:26,420
it becomes a very simple process and

952
00:41:29,980 --> 00:41:28,100
there's one step that they have to

953
00:41:32,080 --> 00:41:29,990
complete to get what they need at the

954
00:41:33,849 --> 00:41:32,090
end of it and our two enzymes that we're

955
00:41:35,680 --> 00:41:33,859
targeting our that very final step and

956
00:41:38,320 --> 00:41:35,690
our theory is that if we can just stop

957
00:41:39,310 --> 00:41:38,330
the final step then they're they're a

958
00:41:40,780 --> 00:41:39,320
bit stuck they won't be able to get

959
00:41:42,670 --> 00:41:40,790
their free amino acids they can't build

960
00:41:44,800 --> 00:41:42,680
their own proteins and the parasite

961
00:41:47,530 --> 00:41:44,810
and we have some very effective data

962
00:41:49,990 --> 00:41:47,540
from mouse malaria and from my in

963
00:41:52,180 --> 00:41:50,000

culture in vitro culture to say that

964

00:41:53,530 --> 00:41:52,190

this will work very very well so so what

965

00:41:55,960 --> 00:41:53,540

you're doing is you're designing a

966

00:41:57,670 --> 00:41:55,970

compound that kind of fits like a key

967

00:41:59,680 --> 00:41:57,680

into the lock into a part of that ended

968

00:42:01,960 --> 00:41:59,690

about you absolutely so the enzymes are

969

00:42:04,330 --> 00:42:01,970

pretty Aizaz so they break down proteins

970

00:42:05,830 --> 00:42:04,340

generally so what we're doing is

971

00:42:07,240 --> 00:42:05,840

essentially putting a compound into the

972

00:42:10,630 --> 00:42:07,250

middle of that crow DA's where it would

973

00:42:11,920 --> 00:42:10,640

normally in a normal situation would you

974

00:42:13,510 --> 00:42:11,930

know choose something up or break it

975

00:42:16,450 --> 00:42:13,520

down we're actually going to stop that

976
00:42:17,830 --> 00:42:16,460
radios from working completely and so

977
00:42:20,230 --> 00:42:17,840
what we were doing is inhibiting the

978
00:42:22,210 --> 00:42:20,240
function of that produce and then it's

979
00:42:23,890 --> 00:42:22,220
essentially den the water it can't do

980
00:42:26,350 --> 00:42:23,900
what it's meant to do and it stops the

981
00:42:29,650 --> 00:42:26,360
process of hemoglobin digestion these

982
00:42:31,030 --> 00:42:29,660
methods share is different to how some

983
00:42:32,590 --> 00:42:31,040
drug development processes work by

984
00:42:34,660 --> 00:42:32,600
screening large quantities of say

985
00:42:35,890 --> 00:42:34,670
naturally occurring compounds but the

986
00:42:38,170 --> 00:42:35,900
method you're using is really very

987
00:42:39,790 --> 00:42:38,180
specific isn't it by working out the

988
00:42:41,410 --> 00:42:39,800

shape of this enzyme first and then

989

00:42:43,600 --> 00:42:41,420

designing something to fit into it yep

990

00:42:44,890 --> 00:42:43,610

we've been very very lucky I mean from a

991

00:42:46,210 --> 00:42:44,900

drug design point of view everyone would

992

00:42:48,010 --> 00:42:46,220

like to go do what we've done and

993

00:42:49,690 --> 00:42:48,020

sometimes it's not possible so what we

994

00:42:51,790 --> 00:42:49,700

did was go and actually look at the

995

00:42:54,160 --> 00:42:51,800

detail the atomic details of the two

996

00:42:55,690 --> 00:42:54,170

enzymes and we can really now tell this

997

00:42:56,860 --> 00:42:55,700

you know when we look at commercial

998

00:42:58,810 --> 00:42:56,870

compounds that are out there we could

999

00:43:01,060 --> 00:42:58,820

say now that won't work because of this

1000

00:43:03,520 --> 00:43:01,070

because we have exquisite detail of

1001
00:43:04,900 --> 00:43:03,530
these active sites so now we can

1002
00:43:06,520 --> 00:43:04,910
actually go through with the help of

1003
00:43:08,170 --> 00:43:06,530
medicinal chemists and so you know

1004
00:43:10,270 --> 00:43:08,180
pharmaceutical and it's not chemist who

1005
00:43:11,620 --> 00:43:10,280
understand that you know chemicals have

1006
00:43:13,060 --> 00:43:11,630
got to make it through to the human body

1007
00:43:15,370 --> 00:43:13,070
and they've got to be soluble in water

1008
00:43:16,720 --> 00:43:15,380
and then can't be toxic and you know we

1009
00:43:18,550 --> 00:43:16,730
can say that I mole can we have this

1010
00:43:19,750 --> 00:43:18,560
compound here and they can go yes or no

1011
00:43:21,130 --> 00:43:19,760
and they can say well can we add that

1012
00:43:22,600 --> 00:43:21,140
there and I will be able to say to them

1013
00:43:25,240 --> 00:43:22,610

you will know you can't because that

1014

00:43:27,190 --> 00:43:25,250

won't fit with the protease so it does

1015

00:43:29,860 --> 00:43:27,200

give us incredible detail to go and

1016

00:43:32,440 --> 00:43:29,870

design drugs that will hopefully work so

1017

00:43:34,600 --> 00:43:32,450

yeah well you demand that method by

1018

00:43:36,340 --> 00:43:34,610

analyzing the protein by its structure

1019

00:43:38,560 --> 00:43:36,350

so you actually crystallize it do we do

1020

00:43:40,450 --> 00:43:38,570

yes and then how do you go from making

1021

00:43:43,359 --> 00:43:40,460

the crystal of a protein into working

1022

00:43:45,460 --> 00:43:43,369

out how it is structured what we do is

1023

00:43:47,349 --> 00:43:45,470

so we literally you make the protein

1024

00:43:50,079 --> 00:43:47,359

until you perform and you grow crystals

1025

00:43:51,460 --> 00:43:50,089

and that is a process in itself so if

1026
00:43:53,319 --> 00:43:51,470
you're lucky enough to get crystals of a

1027
00:43:55,749 --> 00:43:53,329
protein which we work for this

1028
00:43:56,950 --> 00:43:55,759
particular project what we do is we take

1029
00:43:59,980 --> 00:43:56,960
the crystals to the Australian sin

1030
00:44:02,200 --> 00:43:59,990
contrato and that's a large x-ray being

1031
00:44:04,480 --> 00:44:02,210
facility and basically we throw x-ray

1032
00:44:06,460 --> 00:44:04,490
beams at it and the idea being that the

1033
00:44:08,980 --> 00:44:06,470
crystal is solid and the x-ray beams hit

1034
00:44:11,170 --> 00:44:08,990
it and they diffract in a certain

1035
00:44:13,059 --> 00:44:11,180
pattern and the way they differ act the

1036
00:44:14,799 --> 00:44:13,069
way they bounce off the crystal will be

1037
00:44:16,930 --> 00:44:14,809
dependent on what the protein looks like

1038
00:44:18,249 --> 00:44:16,940

in three-dimensional space so we can't

1039

00:44:19,900 --> 00:44:18,259

see the protein of course it's beyond

1040

00:44:21,609 --> 00:44:19,910

what we can see but what we do is take

1041

00:44:23,559 --> 00:44:21,619

the diffraction data from those x-ray

1042

00:44:25,630 --> 00:44:23,569

beans and through mathematical

1043

00:44:27,759 --> 00:44:25,640

calculations and a lot of computational

1044

00:44:29,319 --> 00:44:27,769

power we convert that to what that means

1045

00:44:31,180 --> 00:44:29,329

in terms of three-dimensional space and

1046

00:44:33,640 --> 00:44:31,190

that becomes our x-ray crystal structure

1047

00:44:35,230 --> 00:44:33,650

so is that a similar process to so how

1048

00:44:36,880 --> 00:44:35,240

the structure of DNA was finally

1049

00:44:38,289 --> 00:44:36,890

anticipated absolutely completely the

1050

00:44:39,940 --> 00:44:38,299

scientists had would know about that

1051
00:44:42,160 --> 00:44:39,950
yeah how the Delta Felix was eventually

1052
00:44:43,569 --> 00:44:42,170
yet a lucid and an interesting new the

1053
00:44:46,210 --> 00:44:43,579
first protein I think to be crystallized

1054
00:44:47,620 --> 00:44:46,220
was he an igloo oh so am I glogan was

1055
00:44:49,870 --> 00:44:47,630
one of the first ones ever to be done

1056
00:44:51,849 --> 00:44:49,880
for a protein structure and that's where

1057
00:44:53,499 --> 00:44:51,859
the study of structural biology came

1058
00:44:56,380 --> 00:44:53,509
from was the diffraction data from

1059
00:44:58,089 --> 00:44:56,390
protein crystals and that translation

1060
00:44:59,410 --> 00:44:58,099
and calculation from depression data to

1061
00:45:01,420 --> 00:44:59,420
what it looks like in three-dimensional

1062
00:45:04,089 --> 00:45:01,430
space yeah so this is a really good

1063
00:45:05,620 --> 00:45:04,099

example sharing of how basic science

1064

00:45:08,620 --> 00:45:05,630

that you and I do in the lab every day

1065

00:45:10,180 --> 00:45:08,630

you know which is sometimes people don't

1066

00:45:13,299 --> 00:45:10,190

really understand how this applies to a

1067

00:45:15,249 --> 00:45:13,309

bigger problem and in the developing

1068

00:45:16,569 --> 00:45:15,259

world and also in a tentative sanity but

1069

00:45:17,499 --> 00:45:16,579

in addition I just wanted you to give

1070

00:45:19,029 --> 00:45:17,509

Alice doesn't idea

1071

00:45:20,949 --> 00:45:19,039

how many people are involved in this

1072

00:45:23,620 --> 00:45:20,959

project if I know you have is pretty

1073

00:45:26,229 --> 00:45:23,630

lots of vibrating I do under now I do

1074

00:45:28,029 --> 00:45:26,239

and to be fair projects like mine simply

1075

00:45:30,279 --> 00:45:28,039

can't exist one laboratory these days

1076

00:45:32,079 --> 00:45:30,289

cannot do the science that we need to do

1077

00:45:33,699 --> 00:45:32,089

I mean our understanding has progressed

1078

00:45:35,889 --> 00:45:33,709

so far that you need to bring in people

1079

00:45:37,719 --> 00:45:35,899

with every level of expertise so I'm a

1080

00:45:40,059 --> 00:45:37,729

structural biologist so I do x-ray

1081

00:45:41,620 --> 00:45:40,069

crystallography um and we do structural

1082

00:45:43,209 --> 00:45:41,630

biology so we do this kind of

1083

00:45:44,919 --> 00:45:43,219

computational design and things like

1084

00:45:47,589 --> 00:45:44,929

that minus university has a huge

1085

00:45:50,229 --> 00:45:47,599

structural biology unit and that's our

1086

00:45:51,759 --> 00:45:50,239

focus for this project however of course

1087

00:45:54,189 --> 00:45:51,769

it's a malarial project I'm not a

1088

00:45:55,659 --> 00:45:54,199

malarial parasitologist so we have a

1089

00:45:56,889 --> 00:45:55,669

large group in Queensland at the

1090

00:45:59,319 --> 00:45:56,899

queensland institute of medical research

1091

00:46:01,779 --> 00:45:59,329

and that's headed up by dr. Don Garber

1092

00:46:03,729 --> 00:46:01,789

and they've done huge amounts of

1093

00:46:06,249 --> 00:46:03,739

research into this they've done mouse

1094

00:46:08,079 --> 00:46:06,259

murine some studies and malaria so of

1095

00:46:09,789 --> 00:46:08,089

course we can't you know test humans for

1096

00:46:13,299 --> 00:46:09,799

our drugs so we do have to test my eyes

1097

00:46:15,729 --> 00:46:13,309

yeah they've also done in culture all of

1098

00:46:18,339 --> 00:46:15,739

the human parasite cell lines and

1099

00:46:20,499 --> 00:46:18,349

testing so all the parasitology has been

1100

00:46:21,999 --> 00:46:20,509

down here in Queensland the actual

1101

00:46:24,459 --> 00:46:22,009

enzyme itself was identified by

1102

00:46:25,689 --> 00:46:24,469

Professor John Dalton who at the time

1103

00:46:28,629 --> 00:46:25,699

was at the university of technology

1104

00:46:30,669 --> 00:46:28,639

sydney and he and his students and

1105

00:46:32,679 --> 00:46:30,679

postdocs actually identified the

1106

00:46:33,819 --> 00:46:32,689

proteases they worked out how they

1107

00:46:36,219 --> 00:46:33,829

worked they worked out how to purify

1108

00:46:38,049 --> 00:46:36,229

them and make them soluble professor

1109

00:46:39,399 --> 00:46:38,059

Dalton now is at McGill University in

1110

00:46:42,219 --> 00:46:39,409

Canada so we continue to have a great

1111

00:46:43,629 --> 00:46:42,229

collaboration with him over there the

1112

00:46:45,969 --> 00:46:43,639

Australian synket ron has been a huge

1113

00:46:47,889 --> 00:46:45,979

resource for this you can't do a drug

1114

00:46:49,269 --> 00:46:47,899

design without a synchrotron in your

1115

00:46:51,189 --> 00:46:49,279

nation so we used to have to go to

1116

00:46:53,169 --> 00:46:51,199

Chicago before Australia secret ron was

1117

00:46:54,549 --> 00:46:53,179

built now I'm very lucky than 10 minutes

1118

00:46:56,499 --> 00:46:54,559

down the road from there and we have

1119

00:46:57,580 --> 00:46:56,509

allocated time it wouldn't have been

1120

00:46:59,530 --> 00:46:57,590

possible with

1121

00:47:01,750 --> 00:46:59,540

and then the drugs themselves so the

1122

00:47:02,920 --> 00:47:01,760

chemistry of what we build it's very

1123

00:47:04,360 --> 00:47:02,930

easy for me to look on a cult and

1124

00:47:05,890 --> 00:47:04,370

computer and say I need that and that

1125

00:47:08,500 --> 00:47:05,900

and that you need to find someone to

1126

00:47:10,450 --> 00:47:08,510

make it and so we have groups from

1127

00:47:12,130 --> 00:47:10,460

America and Poland who made all of those

1128

00:47:14,740 --> 00:47:12,140

compounds and of course we have a low

1129

00:47:17,590 --> 00:47:14,750

funding body to pay bills so it's a huge

1130

00:47:19,330 --> 00:47:17,600

collaboration things projects and alone

1131

00:47:21,190 --> 00:47:19,340

and get bigger as I go along too yeah

1132

00:47:22,750 --> 00:47:21,200

well thanks very much for talking to us

1133

00:47:24,370 --> 00:47:22,760

today Sheena and good luck with the rest

1134

00:47:27,250 --> 00:47:24,380

of your work for malaria thanks very

1135

00:47:29,410 --> 00:47:27,260

much for that well there's just another

1136

00:47:31,390 --> 00:47:29,420

example of how basic bench science is

1137

00:47:34,240 --> 00:47:31,400

helping solve a big clinical problem in

1138

00:47:36,280 --> 00:47:34,250

the developing world we thank dr. Sheena

1139

00:47:37,960 --> 00:47:36,290

McGowan for her time and if you'd like

1140

00:47:43,330 --> 00:47:37,970

to know more about her work and that of

1141

00:47:46,120 --> 00:47:43,340

her team head to ww em on a CD uau and

1142

00:47:47,680 --> 00:47:46,130

search for dr. Sheena McGowan or you can

1143

00:47:51,160 --> 00:47:47,690

find some more information about her

1144

00:47:52,930 --> 00:47:51,170

work on skeptics book calm and until

1145

00:48:04,730 --> 00:47:52,940

next time this has been dr. Reggie

1146

00:48:10,250 --> 00:48:07,980

hello I'm Tony Pittman the presenter of

1147

00:48:13,170 --> 00:48:10,260

the weekly radio show and podcast

1148

00:48:15,630 --> 00:48:13,180

reality check broadcast from here in

1149

00:48:17,430 --> 00:48:15,640

Melbourne Australia and if you like

1150

00:48:19,500 --> 00:48:17,440

listening to the skeptic zone maybe

1151

00:48:22,859 --> 00:48:19,510

you'd like to check out reality check

1152

00:48:26,309 --> 00:48:22,869

each week we bring you a roundup of LGBT

1153

00:48:29,849 --> 00:48:26,319

news that's news related to lesbian gay

1154

00:48:33,569 --> 00:48:29,859

bisexual and transgender issues plus a

1155

00:48:35,609 --> 00:48:33,579

movie review plus a serious skeptical

1156

00:48:39,720 --> 00:48:35,619

analysis of a topic related to

1157

00:48:41,099 --> 00:48:39,730

pseudoscience or the paranormal so if it

1158

00:48:44,789 --> 00:48:41,109

sounds like it could be right up your

1159

00:48:48,480 --> 00:48:44,799

alley visit our website at reality check

1160

00:48:51,510 --> 00:48:48,490

online dot net there you can listen

1161

00:49:12,010 --> 00:48:51,520

online download episodes or subscribe

1162

00:49:17,420 --> 00:49:14,240

thank you for joining me for this

1163

00:49:19,400 --> 00:49:17,430

episode of the skeptic zone well we've

1164

00:49:20,990 --> 00:49:19,410

got another year ahead of us and that's

1165

00:49:24,140 --> 00:49:21,000

going to be leading up to town Australia

1166

00:49:27,440 --> 00:49:24,150

of course in November November the 26 to

1167

00:49:29,539 --> 00:49:27,450

the 28 this year lots of details about

1168

00:49:31,519 --> 00:49:29,549

that in the next couple of months I

1169

00:49:35,720 --> 00:49:31,529

think at the Australian skeptics website

1170

00:49:37,849 --> 00:49:35,730

at wwc optics com au and of course the

1171

00:49:44,420 --> 00:49:37,859

james randi educational foundation's

1172

00:49:45,710 --> 00:49:44,430

website at www are indeed o RG so until

1173

00:49:47,870 --> 00:49:45,720

next week and I think we'll have a think

1174

00:49:53,690 --> 00:49:47,880

tank next week this is Richard Saunders

1175

00:49:56,150 --> 00:49:53,700

signing off from Sydney Australia you

1176

00:50:00,769 --> 00:49:56,160

mean listening to the skeptic zone visit

1177

00:50:03,230 --> 00:50:00,779

our website at wwc a petting zoo TV for

1178

00:50:05,540 --> 00:50:03,240

comments contacts and extra video

1179

00:50:08,480 --> 00:50:05,550

reports

1180

00:50:10,520 --> 00:50:08,490

was it