

The Wuhan Coronavirus crisis leads to some investment opportunities

The Wuhan China Coronavirus continues to spread with the latest report at 170 dead and over 7,700 infected, mostly in China but spreading globally. Sadly this may just be the beginning as the WHO considers declaring an International Emergency.

Severe acute respiratory syndrome (SARS)

The most similar coronavirus outbreak was the SARS epidemic between November 2002 and July 2003 lasting about 6-7 months. An outbreak of SARS in southern China (notably Hong Kong) caused an eventual 8,098 cases, resulting in 774 deaths reported in 17 countries.

Investors seeking a safe haven or some positive returns should read on.

The Wuhan Coronavirus – Focused on China but is spreading globally

Confirmed cases of the new coronavirus (2019-nCoV)



Source

Some areas to look at should the Coronavirus get worse

Health care stocks and ETFs (vaccines, treatment, protective clothing)

The Global X MSCI China Health Care ETF (CHIH) or the KraneShares MSCI All China Health Care Index ETF (KURE) are two excellent places to get widespread coverage to the Chinese health care sector. Valuation does not come cheap with the CHIH fund having a PE of 24.71. Nonetheless, China has an aging population and growing health needs. For a global perspective, Blackrock's iShares Global Healthcare ETF (IXJ) has appeal.

Some individual stocks that focus on virus treatment and prevention/vaccines include Biocryst Pharmaceuticals (NASDAQ:

BCRX), Gilead Sciences (NASDAQ: GILD), Moderna (NASDAQ: MRNA), Novavax (NASDAQ: NVAX), Vir Biotechnology (NASDAQ: VIR).

It has been reported that the Chinese government has recommended that doctors test AbbVie's (ABBV) anti-viral drug Aluvia (also known as Kaletra), to patients who have tested positive for the Wuhan coronavirus.

Stocks that make or supply face masks and protective clothing may also see gains. Some names include Alpha Pro Tech Ltd. (NYSE: APT) and Lakeland Industries Inc. (NASDAQ: LAKE).

Screening and treating for the deadly Coronavirus



Source



Source

Chinese internet related stocks (food delivery, entertainment etc)

As consumers choose the safety of home, online shopping and entertainment sites should be winners, particularly in the worst regions such as China. The KraneShares CSI China Internet ETF (KWEB) should benefit as it holds the key Chinese internet stocks. The top ten holdings including online shopping companies Alibaba (NASDAQ: BABA) and JD.com (NASDAQ: JD), food delivery giant Meituan, and gaming and social media giant Tencent (OTC: TCEHY). Conversely TAL Education and TRIP may come under pressure, and it is possible home delivery service companies may run out of willing workers at this time.

The KraneShares CSI China Internet ETF top ten holdings

| Rank | Company Name | % of Net Assets | Ticker | Shares Held | Market Value(\$) |
|------|--------------------------|-----------------|---------|-------------|------------------|
| 1 | ALIBABA GRP-ADR | 9.78% | BABA | 1,149,893 | 241,742,005 |
| 2 | TENCENT HOLDINGS LTD | 9.22% | 700 HK | 4,593,875 | 227,921,422 |
| 3 | MEITUAN DIANPING-CLASS B | 7.66% | 3690 HK | 14,399,500 | 189,437,867 |
| 4 | BAIDU INC - SPON ADR | 7.13% | BIDU | 1,387,746 | 176,146,600 |
| 5 | JD.COM INC-ADR | 6.57% | JD | 4,172,039 | 162,334,037 |
| 6 | TAL EDUCATION GROUP- ADR | 4.15% | TAL | 2,050,916 | 102,463,763 |
| 7 | NETEASE INC-ADR | 4.1% | NTES | 309,070 | 101,340,962 |
| 8 | TRIP.COM GROUP LTD-ADR | 3.73% | TCOM | 2,796,954 | 92,159,634 |
| 9 | PINDUODUO INC-ADR | 3.67% | PDD | 2,456,651 | 90,797,821 |
| 10 | IQIYI INC-ADR | 3.66% | IQ | 4,022,265 | 90,541,185 |

Source: Kranes

Some investments to avoid if the coronavirus gets worse

Any stocks related to Wuhan or nearby areas may take a hit. PepsiCo, Siemens, and automakers Peugeot, Citroen, Renault, Honda, and Dongfeng all have bases in Wuhan or the wider Hubei province. Particularly impacted would be consumer discretionary such as restaurants, entertainment, and shopping centers as people avoid close contact with others.

Chinese travel (E.g: Trip.com (TRIP) (formerly CTRP) and tourism stocks (airlines, cruises, hotels etc) may be badly impacted, especially those linked to Wuhan. During SARS Hong Kong's Cathay Pacific stock fell 30%.

Safe Havens

- Gold and silver
- Cash (the US Dollar, Japanese Yen, or Swiss Franc usually do best)
- Bonds

Closing remarks

Given the Wuhan Coronavirus started only about 1-2 months ago in mid-December 2019 in Wuhan China, the number of affected cases is already approaching the 8,098 SARS cases over the 6-7 months SARS epidemic. This could suggest the epidemic may be 3x or larger than what we saw with SARS. To date, the death rate is smaller so that is a plus.

For now, we should probably assume that we are looking at another 4 months or more of the coronavirus impacts, and further global spread. This would mean despite some early positive moves in the stocks and ETFs discussed, larger gains may still be ahead.

Graphene oxide fights antibiotic pollution

Antibiotics have saved my life. They may have saved your life too dear readers. However there is a very real possibility that they may stop working in the future. Part of the problem is antibiotic pollution and some new research shows that graphene oxide may be able to help. Read on to find out how...

What are Antibiotics and what is the problem?

Antibiotics are medicines used to prevent and treat bacterial infections. The World Health Organisation (WHO) states that *'Antibiotic resistance is rising to dangerously high levels in all parts of the world'* and *'without urgent action, we are heading for a post-antibiotic era, in which common infections and minor injuries can once again kill'*.

Antibiotic resistance

Like other living things bacteria evolve. They change in response to their environment. When a population of infectious bacteria inside our bodies is totally killed this stops the disease. The symptoms can disappear but when the bacteria have not been totally killed off and they can return with increased resistance to the drugs. This is why doctors always state that we must complete the course of treatment.

The problem comes when a population of bacteria is partially killed. The survivors may be slightly less affected by the antibiotic and so live to reproduce offspring that carry increased resistance to the medicine.

Overuse of antibiotics is part of the problem. Another critical problem is that when our animals or we are given antibiotics some of the medicine passes straight through the body, straight through the sewage system and into our watercourses.

The link between pollution and antibiotic resistance

When antibiotics pass through our bodies and wastewater treatment systems they enter our lakes, rivers and seas. From there antibiotics enter the food chain and end up in fish and shellfish that we later eat. Water is also abstracted from rivers to grow crops and feed farm animals that we consume. The problem with small amounts of antibiotics in the environment is that disease-causing bacteria get exposed to less-than-lethal doses of the medicine. You'll probably be familiar with the expression 'what doesn't kill you makes you stronger' well that applies to bacteria too and this is how we end up with antibiotic resistant microorganisms in our environment.

Why don't we develop new antibiotics?

Because it is really hard to do. A paper in the journal *Biochemical pharmacology* laid out the problem clearly: *'Most pharmaceutical companies have stopped or have severely limited investments to discover and develop new antibiotics to treat the increasing prevalence of infections caused by multi-drug resistant bacteria, because the return on investment has been mostly negative for antibiotics that received marketing approved in the last few decades.'*

How does Graphene Oxide help clean up pollution?

Researchers at Qingdao University in China made graphene oxide fibres with calcium alginate.

Tetracycline is one of the most frequently used antibiotics, ranking second in production and usage worldwide. The Chinese team found that this material could selectively adsorb tetracycline from water making it a possible pollution removal treatment for wastewater.

Tetracycline dissolves in water. Most sewage treatment plants are configured to separate solids from water so anything that is dissolved will pass straight through and enter the environment.

Graphene oxide adsorbs 131.6 mg of tetracycline for every gram of graphene oxide and works best at pH6, which is a neutral or slightly acidic condition. The calcium alginate makes graphene fibres that can be separated out as a solid. This is how the pollution control process works.

Summary

This is brand new research just emerging from the laboratory at present. Antibiotic pollution is a pressing public health

issue for which there is a government response.

In Europe the Joint Programming Initiative on Antimicrobial Resistance (JPIAMR) supports innovations against antibiotic resistance. It has funded microbial resistance projects with £67.3M over the past four years. These graphene oxide fibres would be an ideal project for governments to fund. Many successful niche businesses start with government support. Expect to hear more about this in the future.