

# Alpha 1 Antitrypsin MZ Information & Research

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## News & Research Update

Mar 09, 2024

### Website status and research update

Dear subscribers,

We are continuing our research on the small intestine, particularly on Gut Microbiota Dysbiosis (imbalance). For that reason, we added a paper to the website that describes the role of Bile Acids as modulators of gut microbiota composition and function.

You can read that bile acids shape the microbiota composition through their antimicrobial activity and by activating host signaling pathways that maintain gut homeostasis. This means that when the PiMZ liver does not deliver enough Bile Acid, it may lead up to Gut Microbiota Dysbiosis. The main symptoms of dysbiosis are gastrointestinal problems such as abdominal pain, bloating, gas, diarrhea, and constipation. These problems may lead to malabsorption, nutrient deficiencies, anemia, and hypoproteinemia.

Another fun part is the addition of a paper showing the prevalence of Alpha1 PiMZ worldwide and how the "Vikings" spread it.

"Once upon a time", a long time ago (about 2,000 years), the Z mutation arose and persisted in the Swedish population. The survival benefit of the heterozygous state has never been satisfactorily explained, although the homozygous state has been suggested to increase fertility. At the time the mutation arose, life expectancy was short, and smoking and atmospheric pollution were not relevant, such that health (other than neonatal hepatic failure) was probably not affected, even by indoor pollution within the reproductive and active years.

With the Vikings' travels and their social needs at landfall, the Z gene was gradually disseminated throughout the Baltic region and thereafter more widely by sea and land travel.

So when you ever wondered about your heritage, well... here you are !!

See the below pictures;

