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Puraffinity

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WASTE WATER

You've probably heard about Per- and Polyfluoroalkyl Substances.

Don't you? Oh, sure, we all better know the acronym: PFAS.

Right now, there are about 4,700 of them that are authorized on the market.

Now, if Water is a Cycle, and if we introduce PFAS at one end of that cycle, when does it come out?

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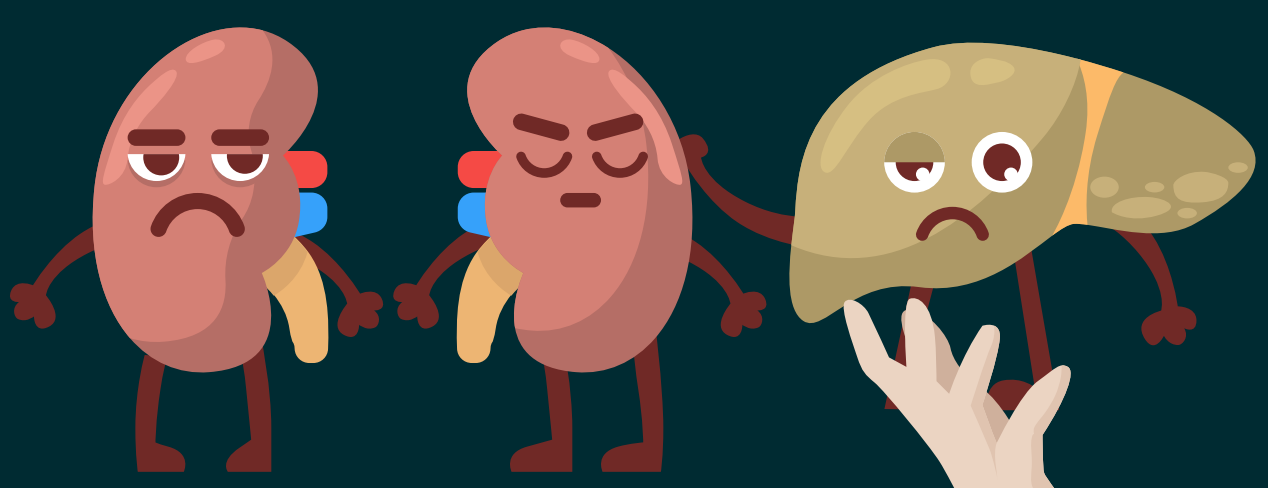
Well, studies have shown PFAS to be detected in over 97% of the US population's blood...

and to have consequent adverse health effects such as liver and kidney damage, cancers, or pregnancy-induced hypertension.



The nordic council of ministers put a price tag on PFAS chemicals in the blood of Europeans. It's 84 billion in annual health costs. Across 740 million citizens in the EU, it makes for over a hundred dollars spent per inhabitant every year just because of PFAS!

That same study, focusing on six diseases, also states that this is probably an underestimate...

This reminds us of how much of a tidal wave the PFAS topic may become:

Industry-wide, there's a massive awakening. Fortune 100 companies are losing billions of dollars of market capitalization because of PFAS liabilities!

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Why? Simply because, if we well know how to create and use PFAS, we're much less sure about how to treat them.

Hence their nickname:

forever chemicals.

Thankfully, the science of PFAS treatment is advancing:

You've got this iterative design/ build/test learn cycle to find the most suited molecular receptor for PFAS in a given matrix

That led to identifying a group of peptides that can capture PFAS and developing peptides mimics to accommodate the water sector's constraints on cost and stability.

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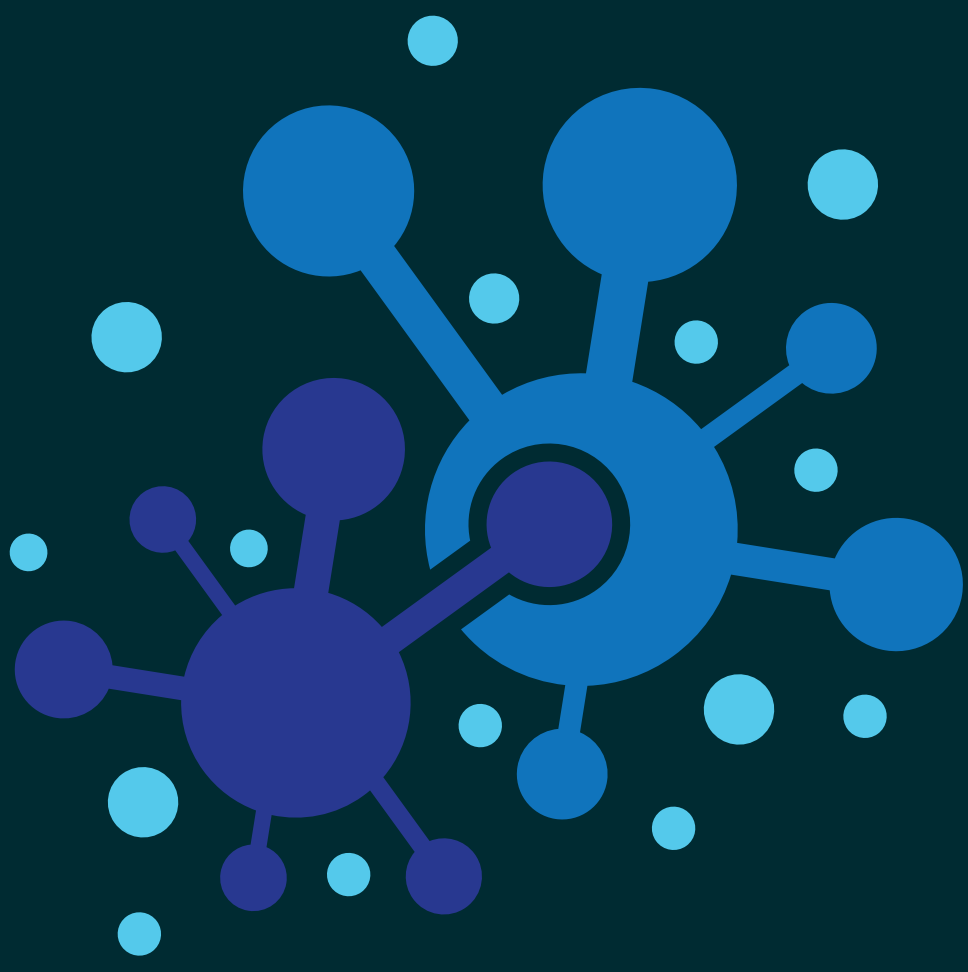
Now, if you're like me, peptides may sound complex. Let's simplify the concept:

You leverage a solvent medium (small granules) containing a sort of small "Pacmen" that stick to the PFAS.



You then separate the granules from the Water, "et voilà!"

Am I oversimplifying it here? Sure (and Henrik is incredibly pedagogic in the long-form interview; consider listening! 😉 **)**

But here's the take-home message:

innovative new players - such as Puraffinity - are industrializing a solution to the "forever chemicals" dilemma.

And as expensive as it may sound today, isn't it just a fraction of the cost of inaction?

We also covered:

- How PFAS could be reused and regenerated from the recycled solvent medium
- How you can control PFAS flows, removals, and by-products, and how you need to go beyond LCMS for that
- How the bottleneck to PFAS treatments might be at an unexpected place: a shortage of operators.
- Where PFAS treatments shall ideally be located, and what shape they should take
- How we shall move on from the human-centric approach to water treatment to also consider the price tag attached to biodiversity losses
- How to best nudge the adoption of PFAS treatment, from regulations to market incentives through investor activism
- How spinning off from academia to entrepreneurship involves a mindset shift and a readiness for war.
- Cycling across the World, studying with monks, time to adoption of new water technology, being a Forbes 30 under 30 and an MIT tech review 35 under 35

... and so much more!

Don't miss a single bite: head over to dww.show!