

Programming in the Life Sciences #24: past research questions

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Fourteen years ago we [started](#) the Programming in the Life Sciences ([PRA3006](#)). The course is designed as a practical, because there surely is theory, but programming is also skills. Originally it was zooming in on pharmacology and the [Open PHACTS](#) webservices (see [this](#), [this](#), and [this post](#)). By now, the focus is on [life sciences SPARQL endpoints](#).

Over the years, not all, but a good number of students have made their project available on GitHub, each with a separate biologically-oriented research question. In this post, I collect a number of them. Because webservices change, some code may not work anymore, but the overview of questions the students were able to study or even answer is interesting in itself. Some years students worked in small teams, some years alone.

- 2019: [pathways associated with 2338 different diseases](#)
- 2020: [increased risks for drugs for people with certain diseases](#)
- 2021: [relation of drug and drug doses and cancer](#)
- 2022: [interactions of drugs psychiatric conditions](#)
- 2023: [liver steatosis adverse outcome pathway network](#) (ChEMBL RDF)
- 2023: [the molecular mechanisms involved in](#)
- 2024: [dopaminergic pathways of the drugs used to treat Parkinson's disease](#)
- 2024: [the dying blue: phylogenetic tree of marine species](#)
- 2024: [global prevalence of dementia and associated symptoms and treatments](#)
- 2025: [exploring protein targets of radiopharmaceuticals](#)

I will add some more, including in brackets which SPARQL endpoint was used.