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Statement of participation

Ali Mohammadpour

has completed the free course including any mandatory tests for:

Metals in medicine

This free 12-hour course explored the chemistry behind compounds containing metals and the impact on human health.

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www.open.edu/openlearn

This statement does not imply the award of credit points nor the conferment of a University Qualification.
This statement confirms that this free course and all mandatory tests were passed by the learner.

Please go to the course on OpenLearn for full details:
https://www.open.edu/openlearn/science-maths-technology/metals-medicine/content-section-0

COURSE CODE: **s315_1**

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Metals in medicine

https://www.open.edu/openlearn/science-maths-technology/metals-medicine/content-section-0

Course summary

This free course, Metals in medicine, focuses on the use of metals and their compounds in the production of images of internal structures in our bodies and on the role of metal-containing compounds as drugs in the treatment of disease.

Learning outcomes

By completing this course, the learner should be able to:

- state the different types of imaging used in medicine, and describe how X-rays are exploited in anatomical imaging
- explain how ^{1}H NMR signals from living tissue can be converted into images useful for diagnostic medicine
- explain what a MRI contrast agent is and describe how the properties of metal complexes be applied to this role
- describe the role of metals in pharmaceutical science
- explain how aspects of the coordination chemistry of cisplatin underpin its effectiveness as an anticancer treatment, and describe the shortcomings of this drug which have necessitated the search for alternatives.

Completed study

The learner has completed the following:

Section 1

Imaging in medicine

Section 2

Anatomical imaging using X-rays

Section 3

Anatomical imaging using MRI

Section 4

Metals for therapeutic applications

Section 5

Cancer therapy: the cisplatin story