

## CRUK Narrative CV

The CRUK Narrative CV is a flexible template where you can highlight your achievements and contributions of particular relevance to your application. When providing examples please describe your specific contribution to each. Please refer to the scheme application guidelines for additional information on how to complete this form.

**Lead/Joint Lead Applicant Name David Jenkins (DJ)**

**Maximum of 2 pages** for the first three questions. Examples below are non-exhaustive.

### 1. How have you contributed to the generation of knowledge?

DJ is an experienced PI working closely with biologists, with research interests in nano-structured materials and devices for environmental and bio-sensing and water filtration. DJ has an international profile, including Visiting Professor positions in India. DJ has a considerable research background in the characterisation of functional materials and devices, which he has developed in new application areas, principally where it impacts on improving 'quality of life' such as drinking water quality and early onset disease diagnostics. DJ is Head of the Nanomaterials and Devices group, which has a strong track record in novel biosensor development.

In developing countries contaminated water brings many health risks that can be prevented by detection and filtration using nanomaterials. His work has engaged communities in the UK and India and included two UK-India Workshops and National and International conferences held in India, co-led by DJ and colleagues in India. Engagement within these events has led on to the current sensor work, which builds upon the graphene-sensor research at UoP for the detection of early onset of Alzheimer's disease and electrochemical sensing for early stage diagnosis of gliomas, to detect contaminants in rural drinking water. This led to two successful research grants

- i. Portable device for multiplexed detection of water-borne pathogens and heavy metals using aptamer conjugated functionalized nanomaterials. GCRF UoP and IISc, 2018. Sensor technology developed in the GCRF project above became the basis of the follow on grant below for early stage pancreatic cancer detection
- ii. Grant title: A novel sensor platform for early detection of pancreatic cancer BBSRC funded from 1<sup>st</sup> April 2023

Publication of his biosensor research, has led to DJ being invited to participate in a current EU Horizons proposal – Smartsense – to contribute sensor research to the consortia's multi sensor platform for food and health diagnostics (pathogens and heavy metals). The underlying theme for all of his current and future research is simply to 'make-a-difference' by developing low cost point of care solutions that improve quality of life.

### 2. How have you contributed to the development of others?

*Describe your achievements and development critical to the success of others, either within a team, part of a collaboration, or through mentorship. This may include, for example:*

- *mentoring and supervision of students and colleagues, or mentoring others in your field;*
- *examples of strategic leadership, how you shaped the direction of a team, organisation, company or institution; and your involvement in establishing collaborations.*

DJ has a long track record of supervision of students at all levels, from BSc/BEng to MSc and PhD. Currently he is supervising 5 MSc project students and 6 PhD students (2 as DoS), with 11 PhD completions to date. His research interests are diverse, and has been called a polymath. This enables DJ to bring so many inputs to the research 'table' and to find ways to integrate other topics into research projects that he is supervising. As part of his general teaching at Plymouth, he aims to inspire and to show students what is

happening currently (research wise) in all modules. Students mostly continue to industry after graduation, so an employability twist is always part their assessment.

### 3. How have you contributed to the wider research community?

DJ contributes to the wider community, nationally and internationally. Within the UK DJ is a member of the EPSRC College and reviews proposals and engages with panel meetings. More widely, DJ is a reviewer and guest editor for many journals in the areas of science and technology, with a focus on nanomaterials and devices. At UoP DJ is the local contact with the Institution of Engineering and Technology (IET) who accredit all the BEng/MEng/MSc programs at the university. AS part of this role DJ engages with the wider professional community, as well as UoP students who run IET on Campus, which he initiated some years back.

DJ has strong research links with a number of universities in India (IISc Bangalore, VIT and SASTRA for example) and holds Visitor / Adjunct Prof positions there. This collaboration led to Workshops and Conferences there as co-host:

- i. Indo- UK workshop on “Clean water through Advanced and Affordable materials “ Chennai - Newton Bhabha (British Council) – 30 UK / India attendees
- ii. International Conference on Environment, Health & Policy Nexus on 27-28th July- 2017
- iii. National Conference on Sustainable Clean Water Technology SCWT17, Crescent University, Chennai - Newton Bhabha (British Council)
- iv. Safe and Sustainable Technologies and Strategies for Integrated Freshwater Resource Management. JSS Mysore and UoP – UKIWC funded 2019, 30 UK / India attendees.

### Additions

#### Provide any further details relevant to your application

*Please give brief details of any breaks in your research career or periods of part-time working (e.g. parental leave, caring responsibilities or time taken out of active research to pursue training). Please also highlight any other issues related to your application including any accessibility needs or reasonable adjustments needed during the application process. These details will be used by our reviewers to make appropriate adjustments when assessing an individual's track record, outputs and career progression.*