



The Biomedical Research Unit at the Institut de Recerca Vall d'Hebron is offering **1 open post doc position** in Prostate and Endometrial Cancer Research and Translational Oncology for highly motivated candidates.

Our research is focused on the molecular, translational and clinical aspects of prostate cancer (PC) and endometrial cancer (EC). All projects are based on clinical needs and unresolved clinical problems. Using experimental models, we develop new research strategies until preclinical validation. The final aim is to develop new and valuable clinical tools to improve diagnosis and prognosis, helping with predictive medicine and therapy. The candidates will work in the following research lines:

Development of non-invasive methods for the early detection of PC in biological fluids. We determine the specific, differential genomic and proteomic profiles to be found in patients with PC, as compared to normal controls, with the ultimate goal of settling on a non-invasive diagnostic tool using urine that can help to circumvent the low specificity of the currently-used PSA serum measurements.

Identification of the molecular markers of bone metastases in prostate cancer. We develop humanized animal models for metastatic prostate cancer able to mimic the human dissemination of PC cells to the bones. We use immunocompromised mice transplanted with human bone fragments. Human prostate cancer cells, which over-express luciferase, allow the detection of metastasis and the continued monitoring of the living animals. This permits the identification of bone metastasis markers. Our goal is the identification of novel molecules and molecular mechanisms involved in metastasis to increase the options for therapeutic intervention. Our investigations also include the testing of new therapeutical approaches using novel drugs in the metastatic prostate cancer.

Development of highly-sensitive and highly-efficient molecular tools for the diagnosis of endometrial cancer in uterine aspirates. Through a proteomic approach, our lab has identified and validated new robust biomarkers for endometrial carcinoma using human tissue samples obtained from uterine aspirates. The objective is to develop a reliable tool for screening EC risk using endometrial biopsies, which will enhance sensitivity and specificity, as well as preclude unnecessary hysteroscopy.

Characterization by proteomics and genomics of markers expressed differently at the EC invasion front and in metastasis. Using proteomics, we identified a series of promising proteins involved in myometrial invasion and *recurrence*, that are differently expressed between cancer and age-matched uterine tissue. The goal is to identify the gene clusters involved in invasion and metastasis and to study their therapeutic potential using preclinical mouse models.

All these studies will require the use of mouse animal models and human samples manipulation

**Profile:**

- Candidates must have a Ph.D. and must have a strong background in at least one of the following areas: tumor biology, molecular biology, cell biology, genomics, and proteomics. Experience with animal work will be a plus
- Fluent in spoken and written English
- Capacity of independent reasoning combined with the willingness to work within a group is essential
- Must have at least 2 papers as a first author

**Type of contract and salary:**

To apply for a 4 year fellowship in April 2010 ([Sara Borrell](#)) the candidate should have a residency in the European Union or a non-EU countries legally resident in Spain, must have obtained his PhD outside the Vall d'Hebron Research Institute after 1 January 2007. Salary will be 36.000€/year including social insurance.

More information about the fellowship can be found at:

[http://www.isciii.es/htdocs/aes/rrhh/sara\\_borrell.htm](http://www.isciii.es/htdocs/aes/rrhh/sara_borrell.htm)

Interested applicants should send a cover letter explaining your research experience and interests, a detailed CV in English, as well as the names and contact information for least 2 references **before 1.4.2010** to:

[jrevento@ir.vhebron.net](mailto:jrevento@ir.vhebron.net)

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