

## JOB OFFER

Position in the project:	Master student
Scientific discipline:	Biotechnology, Microfluidics
Job type (employment contract/stipend):	stipend
Number of job offers:	2
Remuneration/stipend amount/month ( <i>"X0 000 PLN of full remuneration cost, i.e. expected net salary at X 000 PLN"</i> ):	1500 PLN/month
Position starts on:	As soon as possible after completing recruiting procedure
Maximum period of contract/stipend agreement:	15 months
Institution:	Institute of Fundamental Technological Research Polish Academy of Sciences ul. Pawinskiego SB; 02-106 Warszawa, Poland
Project leader:	Dr. Habil. Piotr Korczyk
Project title:	<i>Digital operations on droplets embedded into smart microfluidic architectures for applications in medical diagnostics and biological research</i>  <b>Project is carried out within the First TEAM programme of the Foundation for Polish Science</b>
Project description:	<p>Modern, dynamically developing analytical methods {like e.g. digital PCR) become more and more sophisticated, exploiting methods known in mathematics and informatics. They require execution of complex algorithms on numerous compartments of a sample. For this purpose systems for precise handling of small amounts of liquids are highly required. The microfluidic technology is very attractive in this area, as it offers a reduction of sample and reagent volumes, allows for parallelization, integration and automation of multiple processes in a single device.</p> <p>However, the application of microfluidics in medical</p>

	<p>diagnostics is still hampered. That is caused mainly by the technical complexity of the systems consisting numerous valves, switches and other active components used for executing the required operations on liquids.</p> <p>We want to change that paradigm. The main goal of the project is to develop smart microfluidic architectures with precise instructions embedded into the design of the chip. Instead of the use of numerous active controllers, innovate microfluidic structures will be designed, where input flows will be converted into the cascade of discrete operations on small droplets. These combinatorial modules would induce the programmed self-regulation of the flow, resulting in the generation of a desired distribution of compounds.</p> <p>The technological platform, elaborated within the project, will be used to construct the compact and portable device for screening of toxicity of antibiotics on bacteria.</p>
Key responsibilities include:	<ol style="list-style-type: none"> <li>1. Conducting microbial culture to ensure continuous supply of bacterial cells for experiments</li> <li>2. Cooperate in research related to bacterial culture in microfluidic systems</li> </ol>
Profile of candidates/requirements:	<ol style="list-style-type: none"> <li>1. Status of a 2nd degree student or a student of an equivalent programme at a Polish unit (biology, biotechnology or other related life science discipline)</li> <li>2. Ability to learn new techniques</li> <li>3. Strong scientific, and organizational skills</li> <li>4. Ability to work independently as well as in a team.</li> <li>5. Ability to operate basic laboratory equipment (automatic pipette, ultracentrifuge, microplate reader)</li> <li>6. Experience in the field of cell or microbial culturing will be an advantage</li> </ol>
Required documents:	<ol style="list-style-type: none"> <li>1. Detailed CV including list of laboratory skills</li> <li>2. Optional documents: reference letter (from students scientific supervisor), motivation letter describing scientific interests</li> </ol>
We offer:	<p>Interesting and challenging work in an international team, Work in one of the best-rated scientific units in the country, well-equipped laboratory, opportunity to learn new research techniques</p>
Please submit the following documents to:	<p>piotr.korczyk@ippt.pan.pl</p>

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Application deadline:

November 15, 2018

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Please include in your application document:

“I hereby give my consent for the processing of my personal data by Institute of Fundamental Technological Research PAS with its seat in Warsaw Pawinskiego 5b, 02-106 hereinafter referred to as the Institute for the purpose of the recruitment process and for future recruitment processes conducted by the Institute under Art. 23 ust 1 pkt 1 of the Personal Data Protection Act dated on 29 August 1997, consolidated text: Journal of Laws 2016, item 922 with further amendments and under Art. 6 ust.1 lit. a of Regulation (EU) 2016/ 679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such GDPR (Dz. U. UE. L. z 2016 r. Nr 119).”