Deliverable D6.1

Recruiting Researchers – Early Work

Editor:	Stuart MacLachlan – Lucideon Limited
Deliverable nature:	Other (O)
Dissemination level: (Confidentiality)	Public (PU)
Contractual delivery date:	July 2015
Actual delivery date:	July 2015
Suggested readers:	Research co-ordinators
Version:	1.1
Total number of pages:	64
Keywords:	Marie Skłodowska Curie Programme, Early Stage Researcher, recruitment.

Abstract

HyMedPoly aims to develop new therapies based on biomedical polymers and inorganic materials. This report summarises the activities for D6.1 to recruit the cohort of 15 European Industrial Doctorates for the project up to the end of Project Month 6 (June 2015).

The beneficiaries followed an agreed standard approach to draft and advertise the vacancies, which they will continue into the subsequent recruitment stage.

The ESR positions were advertised widely using amongst others the project website, the Euraxess site, the Marie Skłodowska Curie National Contact Points, press releases, Twitter and Linked-In. The web address for the application page is the https://hymedpoly.eu/open-positions/

Disclaimer

This project has received funding from the European Union's Seventh Programme for research, technological development and demonstration under grant agreement n° 604251

Impressum

[Full project title]

Drug-Free Antibacterial Hybrid Biopolymers for Medical Applications

[Short project title] HyMedPoly

[Number and title of work-package]

WP6 Management

[Number and title of task]

Task 6.1 Managing Recruitment

[Document title]

Recruiting Researchers- Early Work

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Stuart MacLachlan, Lucideon Limited

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Executive summary

HyMedPoly aims to develop new therapies based on biomedical polymers and inorganic materials through a cohort of 15 Early Stage Researchers (ESRs).

The activities to recruit the researchers onto European Industrial Doctorates followed an agreed standard approach to draft and advertise the vacancies, which continues in the subsequent recruitment stage.

A secure online platform was setup for the ESR positions applications, which is published on the project website and gives applicants the opportunity to apply from anywhere just using any standard browser. The web address for the application page is the https://hymedpoly.eu/open-positions/

The ESR positions were advertised widely using amongst others the project and beneficiaries' websites, the Euraxess site, the Marie Skłodowska Curie National Contact Points, press releases, Twitter and Linked-In.

321 applications were received. The next stages of the recruitment process have been agreed with the aim of having ESRs in place by 1 October 2015.

List of authors

Company	Author	Contribution
Lucideon Limited	Stuart MacLachlan	Author

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1 Introduction

Infection has become one of the toughest problems in the medical world. As bacteria become more resistant to drugs, there are fewer effective antibiotics to fight against pathogens.

HyMedPoly aims to develop new therapies based on biomedical polymers and inorganic materials. 10 universities and companies from across Europe, as detailed in Table 1,are creating a cohort of 15 European Industrial Doctorates to synthesis new biopolymers with added antibacterial functionality and develop functionalized bioactive ceramics and glasses that can act as active agents to kill bacteria and prevent their growth.

The new material systems from HyMedPoly are aimed at applications such as wound care, implants and bio film prevention.

Table 1: The HyMedPoly Consortium Members

Consortium Member	Legal Entity Short Name
Beneficiaries	
1.Lucideon	Lucid
2.University of Westminster	UoW
3.Politecnico di Torino	Polito
4.University of Erlangen-Nuremberg	FAU
5.Vornia	Vornia
6.University of Southampton	Soton
7.Knappschafts-Hospital Bochum GmbH	KHB
Partner Organisations	
8.Fraunhofer	FHG
9.IK4 Tekniker	IK4
10.Eurescom	EUR

D6.1 summarises the recruitment activities of HyMedPoly to the end of Project Month 6 (June 2015).

2 Advertising the Early Stage Researcher Vacancies

The fifteen Early Stage Researcher (ESR) vacancies are shown in Table 2 with the lead academic and non-academic beneficiaries.

Table 2 ESR Vacancies

ESR	Title	Acad	Non Acad
1	Degradable Antibacterial Polyesters and Composites	Polito	Vornia
2	Design and Engineering of Therapeutic Polyurethanes	Polito	Vornia
3	Bioresorbable Antibacterial Polyesters	FAU	Lucid
4	Biodegradable and Bioresorbable Polyesters	FAU	Lucid
5	Novel Antibacterial Natural Polymers	UoW	Vornia
6	Hydrogel Based Hybrid Antibacterial Polymers	UoW	Vornia
7	Bioactive Silica Glass	FAU	Lucid
8	Substituted Hydroxyapatite	FAU	Lucid
9	Bioactive Phosphate Glass	FAU	Lucid
10	Innovative Antibacterial Polymers	UoW	KHB
11	Antibacterial Materials For Tissue Engineering Scaffolds	UoW	KHB
12	Mechanobiology of Cell-Surface Interaction	Soton	Lucid
13	Mechanics of Porous and Structured Materials	Soton	Lucid
14	In-vitro Bio-evaluation of Antibacterial Polymers	Polito	KHB
15	Antibacterial testing of Polymers	Polito	KHB

The beneficiaries followed the approach agreed in group discussions when drafting and advertising the vacancies and recruiting the researchers, viz:

- The academic organisation where the ESR will be based will complete the advertisement after consultation and agreement of the industrial partners and WP leader on the project scope.
- The co-ordinator will supply a template so that the adverts all look the same
- Each ESR position will be advertised separately

- The ESR positions will be advertised to give maximum exposure, e.g. organisations' website, project website, networks.

- The advertisements will be placed on the EURAXESS system by the appointing university.

- The advertisements will be placed on the Project website by the co-ordinator.

- The appointment conditions and process must comply with Article32- "Recruitment and Working Conditions for Recruited Researchers" of the Grant Agreement

- The appointment selection and interviews will be led by the academic organisations where the ESR will be based with the industry partners supporting and participating.

- The appointed ESRs must comply with the mobility conditions of the Marie Skłodowska Curie Programme

2.1.1 Vacancy Template and descriptions

The template was drafted in consultation with all of the beneficiaries to provide the vacancy details in a standard form (Annex A).

The details of all fifteen vacancies are presented in Annex B and can be downloaded at https://hymedpoly.eu/open-positions/ .

2.1.2 Application Procedure

A secure online platform was setup for the ESR positions applications, which is published on the project website and gives applicants the opportunity to apply through an online form, from anywhere just using any standard browser. The web address for the application page is the https://hymedpoly.eu/open-positions/

Applicants were directed to the form on the project website and requested to provide the following in applications:

- Application letter detailing the reasons for applying
- Curriculum Vitae (summarising education, positions and academic work – scientific publications)
- A 1-page Personal Statement outlining research interests, research experience, academic achievements and career ambitions.
- Copies of educational certificates and transcript of records
- Details of internationally recognised language qualifications achieved

- List of publications and academic work that the applicant wishes to be considered by the evaluation committee
- Names and contact details of 2-3 references (name, relation to candidate, e-mail and telephone number). One or more letters of reference could be included

2.1.3 Publicising the Vacancies

The ESR positions were advertised widely generally directing applicants to the project website for at least 30 days.

The vacancies were placed on the Euraxess site by the appointing universities with an application deadline of 15 July 2015. Additionally they were advertised on beneficiaries' websites e.g. the Institute of Biomaterials at FAU and Lucideon Limited.

30 contacts at the Marie Skłodowska Curie National Contact Points in 24 EU countries were e-mailed highlighting the project and the opportunity to apply for the 15 studentships. The contact details were obtained from the EC Research and Innovation Participant Portal database.

Five contacts replied and publicised the vacancies through their website or social media contacts:

- Austria
- Czech Republic
- Ireland
- Poland
- Spain.

One, the Netherlands, did not directly publicise vacancies, but provided details of a commercial website, which would. However due to the relatively high cost, this avenue was not pursued.

A press release was drafted for the beneficiaries to adapt and use in through their marketing channels. For example, Lucideon Limited placed the notice on its Twitter feed and Linked-in pages.

3 Next Stages

At the 15 July application deadline 321 application had been received. The group will produce candidate shortlists led by the university partner and backed by the agreement with the Industrial partners on the shortlisted candidates.

The deadline for candidate shortlists is 30 July 2015. There will be no fixed number of candidates.

Interviews will proceed with the aim of having ESRs in place by 1 October 2015.

References

[1] http://hymedpoly.eu/

Annex A ESR Vacancy Template

JOB VACANCY

The HyMedPoly project, "Drug-Free Antibacterial Hybrid Biopolymers for Medical Applications", has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Sklodowska-Curie grant agreement No *643050* for European Industrial Doctorate.

A **3 year PhD position** is available at the **ENTER THE NAME AND ADDRESS OF THE UNIVERSITY**,

Please submit your application as detailed below to :XXXXXX

Deadline for application: xxxxxxxxxxxxxx

Job Description:

Xxxxxxxxx Short paragraph describing the specific research project

Additional Information about HyMedPoly:

Infection has become one of the toughest problems in the medical world. As bacteria become more resistant to drugs, there are fewer effective antibiotics to fight against pathogens.

HyMedPoly aims to develop new therapies based on biomedical polymers and inorganic materials. 10 universities and companies from across Europe are creating a cohort of 15 European Industrial Doctorates to synthesis new biopolymers with added antibacterial functionality and develop functionalized bioactive ceramics and glasses that can act as active agents to kill bacteria and prevent their growth.

The new material systems from HyMedPoly are aimed at applications such as wound care, implants and bio film prevention.

Requirements:

We seek a person with strong motivation and the ability to define his/her own research questions. The applicant must hold a master degree in materials science or chemistry(EDIT FOR SPECIFIC POSITION) and good written and oral communication skills in English. Applicants shall, at the time of recruitment, be in the first four years (full-time equivalent research experience) of their research careers and not yet have been awarded a doctoral degree. Full-Time Equivalent Research Experience is measured from the date when a researcher obtained the degree which would formally entitle him/her to embark on a doctorate. In addition, at the time of recruitment, applicants must not have resided or carried out their main activity (work, studies, etc.) in ADD COUNTRIES OF UNIVERSITY for more than 12 months in the 3 years immediately prior to the recruitment date. Compulsory national service and/or short stays such as holidays are not taken into account.

Important characteristics of the new European Industrial Doctorate programme are:

- you will be jointly supervised by academia and industry supervisors
- you are required to spend 50% of the time in your registered university in ADD COUNTRY OF UNIVERSITY and 50% time with the industrial research organisation ADD NAME OF INDUSTRIAL ORGANSIATION AND COUNTRY OF THE ORGANISATION .

Personal Qualities:

- Excellent collaborative and teamwork skills
- Full command of written and oral English
- Strong dedication and self-motivation

We offer:

- Competitive salary, full time position
- High working capacity
- An excellent training environment at the ENTER UNIVERSITY NAME AND NAME OF ORGANISATION

Two to three sentences max about the institutions supporting the ESR project , logos of the university and supporting company could accompanying advert

Evaluation and Application:

Competences of applicants will be assessed on the basis of the evaluation of their educational and research background, as well as NEEDS TO BE ADAPTED FOR PARTICULAR UNIVERSITY.

The Application must include:

- Application letter detailing the reasons for applying
- CV (summarizing education, positions and academic work - scientific publications)
- A 1-page Personal Statement outlining your research interests, research experience, academic achievements and career ambitions.
- Copies of educational certificates and transcript of records
- Details of internationally recognized language qualifications achieved
- List of publications and academic work that the applicant wishes to be considered by the evaluation committee
- Names and contact details of 2-3 references (name, relation to candidate, e-mail and telephone number). One or more letters of reference may be included

Annex B Positions Descriptions

JOB VACANCY: Degradable Polyesters and Composite Formation (HyMedPoly ESR 1)

The HyMedPoly project, "Drug-Free Antibacterial Hybrid Biopolymers for Medical Applications", has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Sklodowska-Curie grant agreement No *643050* for European Industrial Doctorate.

A **3 year PhD position** is available at the **Politecnico di Torino**

Please submit your application as detailed below through the project website:
http://hymedpoly.eu/open-positions/

Deadline for application: 15 July 2015

Job Description:

The recruited ESR will pursue research work on synthesis and characterization of degradable polyesters and composite formation with antimicrobial degradable additives. The major objective is the design, synthesis and characterization of novel biodegradable polyesters containing advanced degradable additives adding physical advantageous performance which will be designed to have inherent antimicrobial properties. The aim is to develop new medical polymers that have an intrinsic antibacterial functionality. This polyester material development will be focused on with the expertise in this area from Vornia while characterization of these new materials will be performed under the expertise and guidance of Politecnico using Size Exclusion Chromatography, Infrared Spectroscopy, Thermal Analysis, and Water Contact Angle along with antibacterial studies into the efficacy of the novel materials synthesized. Briefly, biodegradable copolymers of lactide, glycolide and caprolactone will be studied in conjunction with the topical additive; acetylated nano crystalline cellulose (NCC). The method of synthesis will be explored from a both a chemical grafting technique along with a physical compounding methodology, both of which will employ a supercritical CO_2 assisted technology which is more environmentally friendly with greater potential for medical space materials due to the lack of solvent residues(inflammatory responses to solvent residues) in the developed materials. Polymer with different composition will be produced, in order to study the effect of the amount of additives, molecular weights, structures and wettability in antibacterial properties. This ESR will develop some of these materials based on a patented supercritical CO_2 system at Vornia Ltd. The ESR will be guided by both academic and commercial expertise and know how to achieve truly tunable polymer properties.
During the 3 years project period, the recruited ESR will be enrolled by the School of Doctorate at Politecnico di Torino. The experimental work will be carried out at Politecnico (academic host) and Vornia Limited (Galway, Ireland, Industrial Host). The ESR will also have the opportunity for secondments at the Fraunhofer Institute (Stuttgart, Germany).

Additional Information about HyMedPoly:

Infection has become one of the toughest problems in the medical world. As bacteria become more resistant to drugs, there are fewer effective antibiotics to fight against pathogens.

HyMedPoly aims to develop new therapies based on biomedical polymers and inorganic materials. 10 universities and companies from across Europe are creating a cohort of 15 European Industrial Doctorates to synthesis new biopolymers with added antibacterial functionality and develop functionalized bioactive ceramics and glasses that can act as active agents to kill bacteria and prevent their growth.

The new material systems from HyMedPoly are aimed at applications such as wound care, implants and bio film prevention.

Requirements:

We seek a person with strong motivation and the ability to define his/her own research questions. The applicant must hold a master degree in Biomedical Engineering, Chemical Engineering, Chemistry, or a related Master of Science degree and good written and oral communication skills in English. Industrial experience in the areas of engineering and science is also relevant. Applicants shall, at the time of recruitment, be in the first four years (full-time equivalent research experience) of their research careers and not yet have been awarded a doctoral degree. Full-Time Equivalent Research Experience is measured from the date when a researcher obtained the degree which would formally entitle him/her to embark on a doctorate. In addition, at the time of recruitment, applicants must not have resided or carried out their main activity (work, studies, etc.) in Italy for more than 12 months in the 3 years immediately prior to the recruitment date. Compulsory national service and/or short stays such as holidays are not taken into account.

Important characteristics of the new European Industrial Doctorate programme are:

- you will be jointly supervised by academia and industry supervisors

Personal Qualities:

- Excellent collaborative and teamwork skills
- Strong dedication and self-motivation
- Certificate of English language knowledge. Recognized certificates:

IELTS with a minimum score of 5.0;

TOEFL ibt with a minimum score of 77 - cbt with a minimum score of 210 - pbt with a minimum score of 547;

Cambridge ESOL examinations - General English exams: minimum level accepted is PET pass with merit;

Otherwise, a certificate stating that students have obtained Bachelor or Master degree, in which English was used as medium of instruction, certifying that "The medium of instruction is English".

Citizens of countries, in which English is one of the official languages, are exempted from providing any certificate.

The call for admission can be submitted even if the above certificates have not yet been obtained, but applicants shall obtain one of them before the deadline for enrolment expires. In this event, the admission to selection procedures will be subject to the obtainment of one among the above certificates; the failure to submit the said certificate in phase of enrolment shall entail the loss of the right to enroll.

We offer:

- Competitive salary in a 3 year full time position
- High working capacity

- An excellent and intersectorial training environment at the academic host Politecnico di Torino, industrial host Vornia Limited (Galway, Ireland) and host for secondments Fraunhofer Institute (Stuttgart, Germany)

POLITO most strategic mission is to create a high quality academic environment where researchers and students from all over the world can study, work and collaborate on innovative and challenging projects. The Politecnico di Torino has been acknowledged by the European Commission for its "HR Excellence in Research", being committed to the implementation of the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers.
The Politecnico di Torino has set the investment in Human Resources for Research as one of the priorities of the Strategic Plan 'Horizon 2020'. Dedicated actions are implemented to attract international top professors and researchers and to invest in young talented researchers in specific strategic areas.

Vornia's strategic mission is to develop high quality industrial environment delivering commercially viable products for the medical devices supply chain/market place. Vornia designs, develops and fabricates customized biomaterial solutions for medical device manufacturers and providers who need to add differentiation to their products in the marketplace. Vornia are an equal opportunities organization and as such collaborate with groups all over the world including a number of European partners. Vornia are committed to providing a challenging environment for development of high quality commercially relevant research skills.

The Fraunhofer-Gesellschaft is the leading organization for applied research in Europe. Its research activities are conducted by 66 institutes and research units at locations throughout Germany. The Fraunhofer-Gesellschaft employs a staff of nearly 24,000, who work with an annual research budget totaling more than 2 billion euros. Of this sum, around 1.7 billion euros is generated through contract research. More than 70 percent of the Fraunhofer-Gesellschaft's contract research revenue is derived from contracts with industry and from publicly financed research projects. International collaborations with excellent research partners and innovative companies around the world ensure direct access to regions of the greatest importance to present and future scientific progress and economic development. The Fraunhofer IPA has had decades of experience in the field of medicine and biotechnology. Our service portfolio includes consulting services, the development of tools, equipment and facilities as well as technology and process developments or conversions.

Evaluation and Application:

Competences of applicants will be assessed on the basis of the evaluation of their educational and research background, according to the following requirements:

Required Research Experiences:
Main Research Field: Chemistry
Sub Research Field: Organic chemistry/Polymer Chemistry

Additional Requirements
- Hands-on experience in the synthesis of polymers and their characterization

The Application must include:

- Application letter detailing the reasons for applying

- CV (summarizing education, positions and academic work - scientific publications and any other relevant experience)
- A 1-page Personal Statement outlining your research interests, research experience, academic achievements and career ambitions.
- Copies of educational certificates and transcript of records
- Details of internationally recognized language qualifications achieved
- List of publications and academic work that the applicant wishes to be considered by the evaluation committee
- Names and contact details of 2-3 references (name, relation to candidate, e-mail and telephone number). One or more letters of reference may be included

JOB VACANCY: Synthesis of Therapeutic Polyurethanes (HyMedPoly ESR 2)

The HyMedPoly project, "Drug-Free Antibacterial Hybrid Biopolymers for Medical Applications", has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Sklodowska-Curie grant agreement No *643050* for European Industrial Doctorate.

A **3 year PhD position** is available at the **Politecnico di Torino**

Please submit your application as detailed below through the project website:
http://hymedpoly.eu/open-positions/

Deadline for application: 15 July 2015

Job Description:

The recruited ESR will pursue research work on synthesis of therapeutic polyurethanes. The major objective is the synthesis, from laboratory to pilot scale, of novel biodegradable polyurethanes containing quaternary nitrogen atoms. The aim is to develop new medical polymers that have an intrinsic antibacterial functionality. Laboratory scale synthesis will be performed by studying different parameters and reagents, in order to minimize the use of solvents that are considered environmental hazards, and avoid process that will be expensive at the manufacturing scale.
During the 3 years project period, the recruited ESR will be enrolled by the School of Doctorate at Politecnico di Torino. The experimental work will be carried out at Politecnico (academic host) and Vornia Limited (Galway, Ireland, Industrial Host). The ESR will also have the opportunity for secondments at the Fraunhofer (Stuttgart, Germany).

Additional Information about HyMedPoly:

Infection has become one of the toughest problems in the medical world. As bacteria become more resistant to drugs, there are fewer effective antibiotics to fight against pathogens.

HyMedPoly aims to develop new therapies based on biomedical polymers and inorganic materials. 10 universities and companies from across Europe are creating a cohort of 15 European Industrial Doctorates to synthesis new biopolymers with added antibacterial functionality and develop functionalized bioactive ceramics and glasses that can act as active agents to kill bacteria and prevent their growth.

The new material systems from HyMedPoly are aimed at applications such as wound care, implants and bio film prevention.

Important characteristics of the new European Industrial Doctorate programme are:

- you will be jointly supervised by academia and industry supervisors
- you are required to spend 50% of the time in your registered university in Italy and 50% time with the industrial research organisation Vornia Limited (Galway, Ireland).

Requirements:

We seek a person with strong motivation and the ability to define his/her own research questions. The applicant must hold:

- a master degree in one of the following disciplines: Chemical Engineering, Biomedical Engineering, Materials Science or Engineering, Chemistry or a related Master of Science degree, and good written and oral communication skills in English. The applicant must have earned the degree prior to 31/07/2015
- Certificate of English language knowledge. Recognized certificates:
  - IELTS with a minimum score of 5.0;
  - TOEFL ibt with a minimum score of 77 - cbt with a minimum score of 210 - pbt with a minimum score of 547;
  - Cambridge ESOL examinations - General English exams: minimum level accepted is PET pass with merit;

Otherwise, a certificate stating that students have obtained Bachelor or Master degree, in which English was used as medium of instruction, certifying that "The medium of instruction is English".
Citizens of countries, in which English is one of the official languages, are exempted from providing any certificate.
The call for admission can be submitted even if the above certificates have not yet been obtained, but applicants shall obtain one of them before the deadline for enrolment expires. In this event, the admission to selection procedures will be subject to the obtainment of one among the above certificates; the failure to submit the said certificate in phase of enrolment shall entail the loss of the right to enroll.

Applicants shall, at the time of recruitment, be in the first four years (full-time equivalent research experience) of their research careers and not yet have been awarded a doctoral degree. Full-Time Equivalent Research Experience is measured from the date when a researcher obtained the degree which would formally entitle him/her to embark on a doctorate. In addition, at the time of recruitment, applicants must not have resided or carried out their main activity (work, studies, etc.) in Italy for more than 12 months in the 3 years immediately prior to the recruitment date. Compulsory national service and/or short stays such as holidays are not taken into account.

Personal Qualities:

- Excellent collaborative and teamwork skills
- Strong dedication and self-motivation

We offer:

- Competitive salary in a 3 year full time position
- High working capacity
- An excellent and intersectorial training environment at the academic host Politecnico di Torino, industrial host Vornia Limited (Galway, Ireland) and host for a secondment at Fraunhofer Institute IPA (Stuttgart, Germany)

POLITO most strategic mission is to create a high quality academic environment where researchers and students from all over the world can study, work and collaborate on innovative and challenging projects. The Politecnico di Torino has been acknowledged by the European Commission for its "HR Excellence in Research", being committed to the implementation of the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers. The Politecnico di Torino has set the investment in Human Resources for Research as one of the priorities of the Strategic Plan 'Horizon 2020'. Dedicated actions are

implemented to attract international top professors and researchers and to invest in young talented researchers in specific strategic areas.

Vornia was founded in 2010 as a spin-out from the Network of Excellence for Functional Biomaterials (NFB) and has since expanded to its premises in the Business Innovation Centre in Galway. Vornia Biomaterials is an early stage company in the ever-growing biomaterials market. The company provides a design, development and fabrication service for customised biomaterial solutions. Vornia designs, develops and fabricates customised biomaterial solutions for medical device manufacturers and providers.

The Fraunhofer-Gesellschaft is the leading organization for applied research in Europe. Its research activities are conducted by 66 institutes and research units at locations throughout Germany. The Fraunhofer-Gesellschaft employs a staff of nearly 24,000, who work with an annual research budget totaling more than 2 billion euros. Of this sum, around 1.7 billion euros is generated through contract research. More than 70 percent of the Fraunhofer-Gesellschaft's contract research revenue is derived from contracts with industry and from publicly financed research projects. International collaborations with excellent research partners and innovative companies around the world ensure direct access to regions of the greatest importance to present and future scientific progress and economic development.The Fraunhofer IPA has had decades of experience in the field of medicine and biotechnology. Our service portfolio includes consulting services, the development of tools, equipment and facilities as well as technology and process developments or conversions.

Evaluation and Application:

Competences of applicants will be assessed on the basis of the evaluation of their educational and research background, according to the following Requirements:

Required Research Experiences
Main Research Field Chemistry
Sub Research Field Organic/Industrial/Polymer Chemistry

Additional Requirements

- Experience in synthesis and scaling up

The Application must include:

- Application letter detailing the reasons for applying
- CV (summarizing education, positions and academic work - scientific publications)
- A 1-page Personal Statement outlining your research interests, research experience, academic achievements and career ambitions.
- Copies of educational certificates and transcript of records
- Details of internationally recognized language qualifications achieved
- List of publications and academic work that the applicant wishes to be considered by the evaluation committee
- Names and contact details of 2-3 references (name, relation to candidate, e-mail and telephone number). One or more letters of reference may be included

JOB VACANCY: Bioresorbable Antibacterial Polyesters (HyMedPoly ESR 3)

The HyMedPoly project, “Drug-Free Antibacterial Hybrid Biopolymers for Medical Applications”, has received funding from the European Union’s Horizon 2020 research and innovation programme under the Marie Sklodowska-Curie grant agreement No *643050* for European Industrial Doctorate.

A **3 year PhD position** is available:

Institute of Biomaterials
Department of Materials Science and Engineering
University of Erlangen-Nuremberg
91058 Erlangen, Germany

Please submit your application as detailed through the HyMedPoly website at
http://hymedpoly.eu/open-positions/

Deadline for application: 15 July 2015

Job Description:

The project will study biodegradable and bioresorbable polyesters to develop co-polymers with variable degradation rates and acidity. (**Academic approach – fundamental science**)

50% of the project time will be at the University of Erlangen-Nuremberg in Germany and 50% of the project time will be spent at Lucideon Limited in the United Kingdom.

Additional Information about HyMedPoly:

Infection has become one of the toughest problems in the medical world. As bacteria become more resistant to drugs, there are fewer effective antibiotics to fight against pathogens.

HyMedPoly aims to develop new therapies based on biomedical polymers and inorganic materials. 10 universities and companies from across Europe are creating a cohort of 15 European Industrial Doctorates to synthesis new biopolymers with added antibacterial functionality and develop functionalized bioactive ceramics and glasses that can act as active agents to kill bacteria and prevent their growth.

The new material systems from HyMedPoly are aimed at applications such as wound care, implants and bio film prevention.

Requirements:

We seek a person with strong motivation and the ability to define his/her own research questions.
The applicant must hold:

- a master degree in Materials Science/Engineering or Chemistry. The applicant must have earned the degree prior to 31/07/2015
- Certificate of English language knowledge. Recognized certificates:
  IELTS with a minimum score of 5.0;
  TOEFL ibt with a minimum score of 77 - cbt with a minimum score of 210 - pbt with a minimum score of
  547;
  Cambridge ESOL examinations - General English exams: minimum level accepted is PET pass with merit;

Otherwise, a certificate stating that students have obtained Bachelor or Master degree, in which English was used as medium of instruction, certifying that “The medium of instruction is English". Citizens of countries, in which English is one of the official languages, are exempted from providing any language certificate.
The call for admission can be submitted even if the above certificates have not yet been obtained, but applicants shall obtain one of them before the deadline for enrolment expires. In this event, the admission to selection procedures will be subjected to the obtainment of one of the above certificates; the failure to submit the said certificate in phase of enrolment shall entail the loss of the right to enroll.
Applicants shall, at the time of recruitment, be in the first four years (full-time equivalent research experience) of their research careers and not yet have been awarded a doctoral degree. Full-Time Equivalent Research Experience is measured from the date when a researcher obtained the degree which would formally entitle him/her to embark on a doctorate. In addition, at the time of recruitment, applicants must not have resided or carried out their main activity (work, studies, etc.) in Germany for more than 12 months in the 3 years immediately prior to the recruitment date. Compulsory national service and/or short stays such as holidays are not taken into account.

Important characteristics of the new European Industrial Doctorate programme are:

- you will be jointly supervised by academia and industry supervisors
- you are required to spend 50% of the time in your registered university in Germany (University of Erlangen-Nuremberg- www.fau.de), and 50% time with the industrial research organisation, Lucideon Limited (www.lucideon.com) in Stoke-on-Trent, United Kingdom.

Personal Qualities:

- Excellent collaborative and teamwork skills
- Full command of written and oral English
- Strong dedication and self-motivation

We offer:

- Competitive salary in a 3 year full time position
- High working capacity
- An excellent training environment at the University of Erlangen-Nuremberg and Lucideon Limited.

FRIEDRICH-ALEXANDER UNIVERSITÄT ERLANGEN-NÜRNBERG

Founded in 1743, Friedrich-Alexander University of Erlangen-Nuremberg (FAU) is one of the largest research universities in Germany with around 38,000 students. The five faculties cover the entire spectrum of modern academic disciplines – from humanities, social sciences and theology to medicine, law, economics, sciences and engineering. The Institute of Biomaterials in the Department of Materials Science and Engineering, where this project will be carried out, is an internationally recognized research establishment conducting a broad range of research activities in the field of biomaterials for medical devices, tissue engineering and drug delivery.

LUCIDEON

Lucideon is an international, independent materials technology company that applies its materials expertise in ceramics, metals and polymers to a range of sectors including healthcare, construction, ceramics, aerospace and power engineering. From our state-of-the-art facilities in the UK, US and the Far East, we provide customised solutions to help companies measurably improve performance, profitability and sustainability – of materials, products and of business.

Evaluation and Application:

Competences of applicants will be assessed on the basis of the evaluation of their educational and research background.

The Application must include:

- Application letter detailing the reasons for applying
- CV (summarizing education, positions and academic work - scientific publications)
- A 1-page Personal Statement outlining your research interests, research experience, academic achievements and career ambitions.
- Copies of educational certificates and transcript of records
- Details of internationally recognized language qualifications achieved
- List of publications and academic work that the applicant wishes to be considered by the evaluation committee
- Names and contact details of 2-3 references (name, relation to candidate, e-mail and telephone number). One or more letters of reference may be included

JOB VACANCY: Biodegradable and Bioresorbable Polyesters (HyMedPoly ESR 4)

The HyMedPoly project, “Drug-Free Antibacterial Hybrid Biopolymers for Medical Applications”, has received funding from the European Union’s Horizon 2020 research and innovation programme under the Marie Sklodowska-Curie grant agreement No *643050* for European Industrial Doctorate.

A **3 year PhD position** is available at :

Institute of Biomaterials
Department of Materials Science and Engineering
University of Erlangen-Nuremberg
91058 Erlangen, Germany

Please submit your application as detailed through the HyMedPoly website at http://hymedpoly.eu/open-positions/

Deadline for application: 15 July 2015

Job Description:

The project will study biodegradable and bioresorbable polyesters to develop co-polymers with variable degradation rates and acidity and investigate further development for industrial applications. (**Industry approach – applied science**)

50% of the project time will be at the University of Erlangen-Nuremberg in Germany and 50% of the project time will be spent at Lucideon Limited in the United Kingdom.

Additional Information about HyMedPoly:

Infection has become one of the toughest problems in the medical world. As bacteria become more resistant to drugs, there are fewer effective antibiotics to fight against pathogens.

HyMedPoly aims to develop new therapies based on biomedical polymers and inorganic materials. 10 universities and companies from across Europe are creating a cohort of 15 European Industrial Doctorates to synthesis new biopolymers with added antibacterial functionality and develop functionalized bioactive ceramics and glasses that can act as active agents to kill bacteria and prevent their growth.

The new material systems from HyMedPoly are aimed at applications such as wound care, implants and bio film prevention.

Requirements:

We seek a person with strong motivation and the ability to define his/her own research questions.
The applicant must hold:

- a master degree in Materials Science/Engineering or Chemistry. The applicant must have earned the degree prior to 31/07/2015
- Certificate of English language knowledge. Recognized certificates:
  IELTS with a minimum score of 5.0;
  TOEFL ibt with a minimum score of 77 - cbt with a minimum score of 210 - pbt with a minimum score of
  547;
  Cambridge ESOL examinations - General English exams: minimum level accepted is PET pass with merit;

Otherwise, a certificate stating that students have obtained Bachelor or Master degree, in which English was used as medium of instruction, certifying that “The medium of instruction is English”. Citizens of countries, in which English is one of the official languages, are exempted from providing any language certificate.

The call for admission can be submitted even if the above certificates have not yet been obtained, but applicants shall obtain one of them before the deadline for enrolment expires. In this event, the admission to selection procedures will be subjected to the obtainment of one of the above certificates; the failure to submit the said certificate in phase of enrolment shall entail the loss of the right to enroll.
Applicants shall, at the time of recruitment, be in the first four years (full-time equivalent research experience) of their research careers and not yet have been awarded a doctoral degree. Full-Time Equivalent Research Experience is measured from the date when a researcher obtained the degree which would formally entitle him/her to embark on a doctorate. In addition, at the time of recruitment, applicants must not have resided or carried out their main activity (work, studies, etc.) in Germany for more than 12 months in the 3 years immediately prior to the recruitment date. Compulsory national service and/or short stays such as holidays are not taken into account.

Important characteristics of the new European Industrial Doctorate programme are:

- you will be jointly supervised by academia and industry supervisors
- you are required to spend 50% of the time in your registered university in Germany (University of Erlangen-Nuremberg- www.fau.de), and 50% time with the industrial research organisation, Lucideon Limited (www.lucideon.com) in Stoke-on-Trent, United Kingdom.

Personal Qualities:

- Excellent collaborative and teamwork skills
- Full command of written and oral English
- Strong dedication and self-motivation

We offer:

- Competitive salary in a 3 year full time position
- High working capacity
- An excellent training environment at the University of Erlangen-Nuremberg and Lucideon Limited.

FRIEDRICH-ALEXANDER UNIVERSITÄT ERLANGEN-NÜRNBERG

Founded in 1743, Friedrich-Alexander University of Erlangen-Nuremberg (FAU) is one of the largest research universities in Germany with around 38,000 students. The five faculties cover the entire spectrum of modern academic disciplines – from humanities, social sciences and theology to medicine, law, economics, sciences and engineering. The Institute of Biomaterials in the Department of Materials Science and Engineering, where this project will be carried out, is an internationally recognized research establishment conducting a broad range of research activities in the field of biomaterials for medical devices, tissue engineering and drug delivery.

LUCIDEON

Lucideon is an international, independent materials technology company that applies its materials expertise in ceramics, metals and polymers to a range of sectors including healthcare, construction, ceramics, aerospace and power engineering. From our state-of-the-art facilities in the UK, US and the Far East, we provide customised solutions to help companies measurably improve performance, profitability and sustainability – of materials, products and of business.

Evaluation and Application:

Competences of applicants will be assessed on the basis of the evaluation of their educational and research background.

The Application must include:

- Application letter detailing the reasons for applying
- CV (summarizing education, positions and academic work - scientific publications)
- A 1-page Personal Statement outlining your research interests, research experience, academic achievements and career ambitions.
- Copies of educational certificates and transcript of records
- Details of internationally recognized language qualifications achieved
- List of publications and academic work that the applicant wishes to be considered by the evaluation committee
- Names and contact details of 2-3 references (name, relation to candidate, e-mail and telephone number). One or more letters of reference may be included

JOB VACANCY: Novel Antibacterial Natural Polymers (HyMedPoly ESR 5)

The HyMedPoly project, “Drug-Free Antibacterial Hybrid Biopolymers for Medical Applications”, has received funding from the European Union’s Horizon 2020 research and innovation programme under the Marie Sklodowska-Curie grant agreement No *643050* for European Industrial Doctorate.

A **3 year PhD position** is available at the **University of Westminster, London, UK**

Please submit your application as detailed below through the project website:
http://hymedpoly.eu/open-positions/

Deadline for application: 15th July 2015

Job Description:
The recruited candidate will pursue research work on the development of novel antibacterial natural polymers produced using bacterial fermentation technology, for use in a range of biomedical applications including soft and hard tissue engineering, wound healing, drug delivery and medical device development. With declining antibiotic efficiency and development of “super bugs”, combined with an ageing population, there is a huge demand for new advanced therapies including development of antibacterial materials. Most current antibacterial materials contain drugs or active factors which then induce the development of antibiotic resistant bacteria. In this project we will aim to develop natural polymers with inherent antibacterial properties, modify and functionalize these polymers in order to allow their use in a range of different applications.

This project will include the development of a family of Polyhydroxyalkanoates (PHAs) with antibacterial properties. PHAs are water-insoluble storage polymers which are polyesters of 3-, 4-, 5- and 6-hydroxyalkanoic acids, produced by a variety of bacterial species, under nutrient-limiting conditions. They are biodegradable and biocompatible, exhibit thermoplastic properties and can be produced from renewable carbon sources. Hence, there has been considerable interest in the commercial exploitation of PHAs. A relatively new class of PHAs are the polythioester derivatives of PHAs including monomers such as 3-mercaptopropionate (3MP), 3-mercaptobutyrate (3MB) or 3-mercaptovalerate (3MV), in addition to 3-hydroxybutyrate (3HB). These sulphur containing polymers are known to have intrinsic antibacterial properties.

The candidate will start with the production of the thioester derivatives of PHAs using *Cupriavidus necator* (*Ralstonia eutropha*), a wide range of sulphur containing carbon sources and optimize fermentation conditions leading to good yields of the polythioesters. In addition to the polythioesters, other PHAs will also be produced using a range of other bacteria and carbon sources. The PHAs produced will be purified using novel supercritical carbon dioxide based green technology (to be developed in Vornia Ltd.), in order to avoid large scale usage of solvents. The polymers produced will be suitably functionalized and thoroughly characterized with respect to chemical, thermal and antibacterial properties. Processing of the polymers including 3D printing will be explored. The ESR will spend 18 months of the project in the University of

Westminister, UK and the remaining 18 months in Vornia Ltd, Ireland. The project should output some novel scientific contribution along with the development of intellectual property.

During the 3 years project period, the recruited PhD candidate will be enrolled by the Faculty of Science and Technology, Department of Life Sciences, University of Westminster, UK and will work within the Biomaterials section of the Applied Biotechnology Research Group led by Dr Ipsita Roy (http://www.westminster.ac.uk/about-us/our-people/directory/roy-ipsita), an internationally leading group in bacteria derived biopolymers. Experimental work will be carried out both at the University of Westminster (London, UK, Academic host) and Vornia Limited (Galway, Ireland, Industrial Host).

Additional Information about HyMedPoly:

Infection has become one of the toughest problems in the medical world. As bacteria become more resistant to drugs, there are fewer effective antibiotics to fight against pathogens.

HyMedPoly aims to develop new therapies based on biomedical polymers and inorganic materials. 10 universities and companies from across Europe are creating a cohort of 15 European Industrial Doctorates to synthesise new biopolymers with added antibacterial functionality and develop functionalized bioactive ceramics and glasses that can act as active agents to kill bacteria and prevent their growth.

The new material systems from HyMedPoly are aimed at applications such as wound care, implants and bio film prevention.

Requirements:

We seek a person with strong motivation and the ability to define his/her own research questions. The applicant must hold a Master's degree in Biochemical Engineering, Biotechnology, Fermentation Technology, Microbial Biotechnology or a related Master of Science degree and good written and oral communication skills in English. Industrial experience in the areas of biochemical engineering and microbial biotechnology is also relevant. Applicants shall, at the time of recruitment, be in the first four years (full-time equivalent research experience) of their research careers and not yet have been awarded a doctoral degree. Full-Time Equivalent Research Experience is measured from the date when a researcher obtained the degree which would formally entitle him/her to embark on a doctorate. In addition, at the time of recruitment, applicants must not have resided or carried out their main activity (work, studies, etc.) in the UK for more than 12 months in the 3 years immediately prior to the recruitment date. Compulsory national service and/or short stays such as holidays are not taken into account.

Important characteristics of the new European Industrial Doctorate programme are:

- you will be jointly supervised by academia and industry supervisors
- you are required to spend 50% of the time in your registered university in the United Kingdom (University of Westminster- www.westminster.ac.uk) and 50% time with the industrial research organization, Vornia (www.vornia.com) in Galway, Ireland.

Personal Qualities:

- Excellent collaborative and teamwork skills

- Strong dedication and self-motivation
- Certificate of English language knowledge.

IELTS with a minimum score of 6.5 and no lower than 6.0 in any individual component is required for all candidates for whom English is not their first/native language.

The application for admission can be submitted even if the above certificate has not yet been obtained, but applicants shall obtain it before the deadline for enrolment expires. In this event, the admission to selection procedures will be subject to the obtainment of the above certificate; the failure to submit the said certificate during enrolment shall entail the loss of the right to enroll.

We offer:

- Competitive salary in a 3 year full time position (3740 €/month)
- Mobility and family allowance (600 or 1100 €/month depending on the researcher's family situation)
- High working capacity
- An excellent and intersectorial training environment at the academic host University of Westminster, London, UK and industrial host Vornia Limited (Galway, Ireland)

UNIVERSITY OF WESTMINSTER

The University of Westminster's most strategic mission is to create a high quality academic environment where researchers and students from all over the world can study, work and collaborate on innovative and challenging projects. At the University of Westminster we pride ourselves on our record of excellence in research that makes a difference – to academia, to the professions, to business, to industry. We have a rich and diverse profile of activity across a broad range of subjects and as highly as we value pure academic research, we are equally committed to ensuring that our knowledge delivers real-world benefits, through knowledge transfer and applied research. (www.westminster.ac.uk)

VORNIA BIOMATERIALS

Vornia's strategic mission is to develop high quality industrial environment delivering commercially viable products for the medical devices supply chain/market place. Vornia designs, develops and fabricates customized biomaterial solutions for medical device manufacturers and providers who need to add differentiation to their products in the marketplace. Vornia are an equal opportunities organization and as such collaborate with groups all over the world including a number of European partners. Vornia are committed to providing a challenging environment for development of high quality commercially relevant research skills. (www.vornia.com)

Evaluation and Application:

Competences of applicants will be assessed on the basis of the evaluation of their educational and research background, according to the following requirements:

Required Research Experiences:

Main Research Field: Biochemical Engineering

Sub Research Field: Microbiology/ Biotechnology/Biopolymers/Biomaterials

Additional Requirements

- Hands-on experience in microbial fermentation and optimization of product yield

The Application must include:

- Application letter detailing the reasons for applying
- CV (summarizing education, positions and academic work - scientific publications and any other relevant experience)
- A 1-page Personal Statement outlining your research interests, research experience, academic achievements and career ambitions.
- Copies of educational certificates and transcript of records
- Details of internationally recognized language qualifications achieved
- List of publications and academic work that the applicant wishes to be considered by the evaluation committee
- Names and contact details of 2-3 references (name, relation to candidate, e-mail and telephone number). One or more letters of reference may be included

Horizon 2020
European Union Funding
for Research & Innovation

JOB VACANCY: Hydrogel Based Hybrid Antibacterial Polymers (HyMedPoly ESR 6)

The HyMedPoly project, “Drug-Free Antibacterial Hybrid Biopolymers for Medical Applications”, has received funding from the European Union’s Horizon 2020 research and innovation programme under the Marie Sklodowska-Curie grant agreement No *643050* for European Industrial Doctorate.

A **3 year PhD position** is available at the **University of Westminster, London, UK**

Please submit your application as detailed below through the project website:
http://hymedpoly.eu/open-positions/

Deadline for application: 15th of July 2015

Job Description:
The recruited candidate will pursue research work on the development of novel hydrogel based hybrid antibacterial polymers for wound healing applications. Hydrogels and their use in biomedical applications has become an area of extensive research in recent years. Hydrogel dressings are designed to hold moisture on the surface of a wound, providing an ideal environment for both cleaning of the wound and allowing the body to rid itself of necrotic tissue. Additionally, hydrogels are nonreactive with biological tissue, permeable to metabolites and non-irritant. Wound infection occurs due to the colonization of various anaerobic and aerobic bacteria in an almost perfect proliferating environment of wound tissue. The wound healing market represents a 20 billion dollar market. With declining antibiotic efficiency and development of “super bugs”, combined with an aging population, there is now a demand for new advanced treatments.

This project will include the development of an existing PEG-based (polyethylene glycol) hyperbranched copolymer technology recently patented and licensed by Vornia Ltd – Title: “Multifunctional Hyperbranched Polymers” (Reference number is US Patent Application No. 14/221,106) from a research and development status to a commercially viable technology with investigation into alternative “greener” production methods. The ESR will start with the synthesis approach and upscaling along with combinations of different antimicrobial and structural additives to the hydrogel material including bacterial cellulose (BC) produced using *Gluconobacter xylinus* at the University of Westminster. The ESR will spend the initial 18 months of the project in Vornia Ltd; Ireland followed by 18 months at the University of Westminister in the UK during the second half, to focus on further development of antibacterial additives and optimising/evaluating the hydrogel properties. The project should output some novel scientific contribution along with the development of intellectual property.

During the 3 years project period, the recruited PhD candidate will be enrolled by the Faculty of Science and Technology, Department of Life Sciences, University of Westminster, UK and will work within the Biomaterials section of the Applied Biotechnology Research Group led by Dr Ipsita Roy (http://www.westminster.ac.uk/about-us/our-people/directory/roy-ipsita), an internationally leading group in bacteria derived biopolymers. Experimental work will be carried out both at the University of Westminster (London, UK, Academic host) and Vornia Limited (Galway, Ireland, Industrial Host).

Additional Information about HyMedPoly:

Infection has become one of the toughest problems in the medical world. As bacteria become more resistant to drugs, there are fewer effective antibiotics to fight against pathogens.

HyMedPoly aims to develop new therapies based on biomedical polymers and inorganic materials. 10 universities and companies from across Europe are creating a cohort of 15 European Industrial Doctorates to synthesize new biopolymers with added antibacterial functionality and develop functionalized bioactive ceramics and glasses that can act as active agents to kill bacteria and prevent their growth.

The new material systems from HyMedPoly are aimed at applications such as wound care, implants and bio film prevention.

Requirements:

We seek a person with strong motivation and the ability to define his/her own research questions. The applicant must hold a Master's degree in Polymer Chemistry, Polymer Science, Material Science, Chemistry, Natural Science, Biomedical Engineering or a related Master of Science degree and good written and oral communication skills in English. Industrial experience in the areas of engineering and science is also relevant. Applicants shall, at the time of recruitment, be in the first four years (full-time equivalent research experience) of their research careers and not yet have been awarded a doctoral degree. Full-Time Equivalent Research Experience is measured from the date when a researcher obtained the degree which would formally entitle him/her to embark on a doctorate. In addition, at the time of recruitment, applicants must not have resided or carried out their main activity (work, studies, etc.) in the UK for more than 12 months in the 3 years immediately prior to the recruitment date. Compulsory national service and/or short stays such as holidays are not taken into account.

Important characteristics of the new European Industrial Doctorate programme are:

- you will be jointly supervised by academia and industry supervisors
- you are required to spend 50% of the time in your registered university in the United Kingdom (University of Westminster- www.westminster.ac.uk) and 50% time with the industrial research organization, Vornia (www.vornia.com) in Galway, Ireland.

Personal Qualities:

- Excellent collaborative and teamwork skills
- Strong dedication and self-motivation
- Certificate of English language knowledge. Recognized certificates:

IELTS with a minimum score of 6.5 and no lower than 6.0 in any individual component is required for all candidates for whom English is not their first/native language.

The application for admission can be submitted even if the above certificates have not yet been obtained, but applicants shall obtain one of them before the deadline for enrolment expires. In this event, the admission to selection procedures will be subject to the obtainment of one among the above certificates; the failure to submit the said certificate during enrolment shall entail the loss of the right to enroll.

We offer:

- Competitive salary in a 3 year full time position (3740 €/month)
- Mobility and family allowance (600 or 1100 €/month depending on the researcher's family situation)
- High working capacity
- An excellent and intersectorial training environment at the academic host, University of Westminster, London, UK and industrial host, Vornia Limited (Galway, Ireland)

UNIVERSITY OF WESTMINSTER

The University of Westminster's most strategic mission is to create a high quality academic environment where researchers and students from all over the world can study, work and collaborate on innovative and challenging projects. At the University of Westminster we pride ourselves on our record of excellence in research that makes a difference – to academia, to the professions, to business, to industry. We have a rich and diverse profile of activity across a broad range of subjects and as highly as we value pure academic research, we are equally committed to ensuring that our knowledge delivers real-world benefits, through knowledge transfer and applied research.

VORNIA BIOMATERIALS

Vornia's strategic mission is to develop high quality industrial environment delivering commercially viable products for the medical devices supply chain/market place. Vornia designs, develops and fabricates customized biomaterial solutions for medical device manufacturers and providers who need to add differentiation to their products in the marketplace. Vornia are an equal opportunities organization and as such collaborate with groups all over the world including a number of European partners. Vornia are committed to providing a challenging environment for development of high quality commercially relevant research skills.

Evaluation and Application:

Competences of applicants will be assessed on the basis of the evaluation of their educational and research background, according to the following requirements:

Required Research Experiences:
Main Research Field: Polymer Chemistry
Sub Research Field: Organic chemistry/ Chemistry/Material Science/Biomaterials

Additional Requirements

- Hands-on experience in the synthesis of polymers and their characterization

The Application must include:

- Application letter detailing the reasons for applying

- CV (summarizing education, positions and academic work - scientific publications and any other relevant experience)
- A 1-page Personal Statement outlining your research interests, research experience, academic achievements and career ambitions.
- Copies of educational certificates and transcript of records
- Details of internationally recognized language qualifications achieved
- List of publications and academic work that the applicant wishes to be considered by the evaluation committee
- Names and contact details of 2-3 references (name, relation to candidate, e-mail and telephone number). One or more letters of reference may be included

JOB VACANCY: Bioactive Silica Glass (HyMedPoly ESR 7)

The HyMedPoly project, “Drug-Free Antibacterial Hybrid Biopolymers for Medical Applications”, has received funding from the European Union’s Horizon 2020 research and innovation programme under the Marie Sklodowska-Curie grant agreement No *643050* for European Industrial Doctorate.

A **3 year PhD position** is available at :

Institute of Biomaterials
Department of Materials Science and Engineering
University of Erlangen-Nuremberg
91058 Erlangen, Germany

Please submit your application as detailed through the HyMedPoly website at http://hymedpoly.eu/open-positions/

Deadline for application: 15 July 2015

Job Description:

The project will study the synthesis of bioactive silica glass to develop nano porous glass with changed surface charge potential. (**Academic approach – fundamental science**)

50% of the project time will be at the University of Erlangen-Nuremberg in Germany and 50% of the project time will be spent at Lucideon Limited in the United Kingdom.

Additional Information about HyMedPoly:

Infection has become one of the toughest problems in the medical world. As bacteria become more resistant to drugs, there are fewer effective antibiotics to fight against pathogens.

HyMedPoly aims to develop new therapies based on biomedical polymers and inorganic materials. 10 universities and companies from across Europe are creating a cohort of 15 European Industrial Doctorates to synthesis new biopolymers with added antibacterial functionality and develop functionalized bioactive ceramics and glasses that can act as active agents to kill bacteria and prevent their growth.

The new material systems from HyMedPoly are aimed at applications such as wound care, implants and bio film prevention.

Requirements:

We seek a person with strong motivation and the ability to define his/her own research questions.
The applicant must hold:

- a master degree in Materials Science/Engineering or Chemistry. The applicant must have earned the degree prior to 31/07/2015
- Certificate of English language knowledge. Recognized certificates:
  IELTS with a minimum score of 5.0;
  TOEFL ibt with a minimum score of 77 - cbt with a minimum score of 210 - pbt with a minimum score of 547;
  Cambridge ESOL examinations - General English exams: minimum level accepted is PET pass with merit;

Otherwise, a certificate stating that students have obtained Bachelor or Master degree, in which English was used as medium of instruction, certifying that “The medium of instruction is English”. Citizens of countries, in which English is one of the official languages, are exempted from providing any language certificate.
The call for admission can be submitted even if the above certificates have not yet been obtained, but applicants shall obtain one of them before the deadline for enrolment expires. In this event, the admission to selection procedures will be subjected to the obtainment of one of the above certificates; the failure to submit the said certificate in phase of enrolment shall entail the loss of the right to enroll.
Applicants shall, at the time of recruitment, be in the first four years (full-time equivalent research experience) of their research careers and not yet have been awarded a doctoral degree. Full-Time Equivalent Research Experience is measured from the date when a researcher obtained the degree which would formally entitle

him/her to embark on a doctorate. In addition, at the time of recruitment, applicants must not have resided or carried out their main activity (work, studies, etc.) in Germany for more than 12 months in the 3 years immediately prior to the recruitment date. Compulsory national service and/or short stays such as holidays are not taken into account.

Important characteristics of the new European Industrial Doctorate programme are:

- you will be jointly supervised by academia and industry supervisors
- you are required to spend 50% of the time in your registered university in Germany (University of Erlangen-Nuremberg- www.fau.de), and 50% time with the industrial research organisation, Lucideon Limited (www.lucideon.com) in Stoke-on-Trent, United Kingdom.

Personal Qualities:

- Excellent collaborative and teamwork skills
- Full command of written and oral English
- Strong dedication and self-motivation

We offer:

- Competitive salary in a 3 year full time position
- High working capacity
- An excellent training environment at the University of Erlangen-Nuremberg and Lucideon Limited.

FRIEDRICH-ALEXANDER UNIVERSITÄT ERLANGEN-NÜRNBERG

Founded in 1743, Friedrich-Alexander University of Erlangen-Nuremberg (FAU) is one of the largest research universities in Germany with around 38,000 students. The five faculties cover the entire spectrum of modern academic disciplines – from humanities, social sciences and theology to medicine, law, economics, sciences and engineering. The Institute of Biomaterials in the Department of Materials Science and Engineering, where this project will be carried out, is an internationally recognized research establishment conducting a broad range of research activities in the field of biomaterials for medical devices, tissue engineering and drug delivery.

LUCIDEON

Lucideon is an international, independent materials technology company that applies its materials expertise in ceramics, metals and polymers to a range of sectors including healthcare, construction, ceramics, aerospace and power engineering. From our state-of-the-art facilities in the UK, US and the Far East, we provide customised solutions to help companies measurably improve performance, profitability and sustainability – of materials, products and of business.

Evaluation and Application:

Competences of applicants will be assessed on the basis of the evaluation of their educational and research background.

The Application must include:

- Application letter detailing the reasons for applying
- CV (summarizing education, positions and academic work - scientific publications)

- A 1-page Personal Statement outlining your research interests, research experience, academic achievements and career ambitions.
- Copies of educational certificates and transcript of records
- Details of internationally recognized language qualifications achieved
- List of publications and academic work that the applicant wishes to be considered by the evaluation committee
- Names and contact details of 2-3 references (name, relation to candidate, e-mail and telephone number). One or more letters of reference may be included

JOB VACANCY: Substituted Hydroxyapatite (HyMedPoly ESR 8)

The HyMedPoly project, “Drug-Free Antibacterial Hybrid Biopolymers for Medical Applications”, has received funding from the European Union’s Horizon 2020 research and innovation programme under the Marie Sklodowska-Curie grant agreement No *643050* for European Industrial Doctorate.

A **3 year PhD position** is available at :

Institute of Biomaterials
Department of Materials Science and Engineering
University of Erlangen-Nuremberg

91058 Erlangen, Germany

Please submit your application as detailed through the HyMedPoly website at http://hymedpoly.eu/open-positions/

Deadline for application: 15 July 2015

Job Description:

The project will study the synthesis of substituted hydroxyapatite with changed charge potential and ion release to develop materials that will prevent bacteria growth for industrial application. (**Industry approach – applied science**)

50% of the project time will be at the University of Erlangen-Nuremberg in Germany and 50% of the project time will be spent at Lucideon Limited in the United Kingdom.

Additional Information about HyMedPoly:

Infection has become one of the toughest problems in the medical world. As bacteria become more resistant to drugs, there are fewer effective antibiotics to fight against pathogens.

HyMedPoly aims to develop new therapies based on biomedical polymers and inorganic materials. 10 universities and companies from across Europe are creating a cohort of 15 European Industrial Doctorates to synthesis new biopolymers with added antibacterial functionality and develop functionalized bioactive ceramics and glasses that can act as active agents to kill bacteria and prevent their growth.

The new material systems from HyMedPoly are aimed at applications such as wound care, implants and bio film prevention.

Requirements:

We seek a person with strong motivation and the ability to define his/her own research questions.
The applicant must hold:

- a master degree in Materials Science/Engineering or Chemistry. The applicant must have earned the degree prior to 31/07/2015
- Certificate of English language knowledge. Recognized certificates:
  IELTS with a minimum score of 5.0;
  TOEFL ibt with a minimum score of 77 - cbt with a minimum score of 210 - pbt with a minimum score of
  547;
  Cambridge ESOL examinations - General English exams: minimum level accepted is PET pass with merit;

Otherwise, a certificate stating that students have obtained Bachelor or Master degree, in which English was used as medium of instruction, certifying that “The medium of instruction is English”. Citizens of countries, in which English is one of the official languages, are exempted from providing any language certificate.
The call for admission can be submitted even if the above certificates have not yet been obtained, but applicants shall obtain one of them before the deadline for enrolment expires. In this event, the admission to selection procedures will be subjected to the obtainment of one of the above certificates; the failure to submit the said certificate in phase of enrolment shall entail the loss of the right to enroll.
Applicants shall, at the time of recruitment, be in the first four years (full-time equivalent research experience) of their research careers and not yet have been awarded a doctoral degree. Full-Time Equivalent Research Experience is measured from the date when a researcher obtained the degree which would formally entitle him/her to embark on a doctorate. In addition, at the time of recruitment, applicants must not have resided or carried out their main activity (work, studies, etc.) in Germany for more than 12 months in the 3 years immediately prior to the recruitment date. Compulsory national service and/or short stays such as holidays are not taken into account.

Important characteristics of the new European Industrial Doctorate programme are:

- you will be jointly supervised by academia and industry supervisors
- you are required to spend 50% of the time in your registered university in Germany (University of Erlangen-Nuremberg- www.fau.de), and 50% time with the industrial research organisation, Lucideon Limited (www.lucideon.com) in Stoke-on-Trent, United Kingdom.

Personal Qualities:

- Excellent collaborative and teamwork skills
- Full command of written and oral English
- Strong dedication and self-motivation

We offer:

- Competitive salary in a 3 year full time position
- High working capacity
- An excellent training environment at the University of Erlangen-Nuremberg and Lucideon Limited.

FRIEDRICH-ALEXANDER UNIVERSITÄT ERLANGEN-NÜRNBERG

Founded in 1743, Friedrich-Alexander University of Erlangen-Nuremberg (FAU) is one of the largest research universities in Germany with around 38,000 students. The five faculties cover the entire spectrum of modern academic disciplines – from humanities, social sciences and theology to medicine, law, economics, sciences and engineering. The Institute of Biomaterials in the Department of Materials Science and Engineering, where this project will be carried out, is an internationally recognized research establishment conducting a broad range of research activities in the field of biomaterials for medical devices, tissue engineering and drug delivery.

LUCIDEON

Lucideon is an international, independent materials technology company that applies its materials expertise in ceramics, metals and polymers to a range of sectors including healthcare, construction, ceramics, aerospace and power engineering. From our state-of-the-art facilities in the UK, US and the Far East, we provide customised solutions to help companies measurably improve performance, profitability and sustainability – of materials, products and of business.

Evaluation and Application:

Competences of applicants will be assessed on the basis of the evaluation of their educational and research background.

The Application must include:

- Application letter detailing the reasons for applying
- CV (summarizing education, positions and academic work - scientific publications)
- A 1-page Personal Statement outlining your research interests, research experience, academic achievements and career ambitions.
- Copies of educational certificates and transcript of records

- Details of internationally recognized language qualifications achieved
- List of publications and academic work that the applicant wishes to be considered by the evaluation committee
- Names and contact details of 2-3 references (name, relation to candidate, e-mail and telephone number). One or more letters of reference may be included

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for Research & Innovation

JOB VACANCY: Bioactive Phosphate Glass (HyMedPoly ESR 9)

The HyMedPoly project, “Drug-Free Antibacterial Hybrid Biopolymers for Medical Applications”, has received funding from the European Union’s Horizon 2020 research and innovation programme under the Marie Sklodowska-Curie grant agreement No *643050* for European Industrial Doctorate.

A **3 year PhD position** is available at:

Institute of Biomaterials
Department of Materials Science and Engineering
University of Erlangen-Nuremberg
91058 Erlangen, Germany

Please submit your application as detailed through the HyMedPoly website at http://hymedpoly.eu/open-positions/

Deadline for application: 15 July 2015

Job Description:

The project will study the synthesis of bioactive phosphate glass to develop materials with charge potential that will prevent bacteria growth for industrial application. (**Industry approach – applied science**)

50% of the project time will be at the University of Erlangen-Nuremberg in Germany and 50% of the project time will be spent at Lucideon Limited in the United Kingdom.

Additional Information about HyMedPoly:

Infection has become one of the toughest problems in the medical world. As bacteria become more resistant to drugs, there are fewer effective antibiotics to fight against pathogens.

HyMedPoly aims to develop new therapies based on biomedical polymers and inorganic materials. 10 universities and companies from across Europe are creating a cohort of 15 European Industrial Doctorates to synthesis new biopolymers with added antibacterial functionality and develop functionalized bioactive ceramics and glasses that can act as active agents to kill bacteria and prevent their growth.

The new material systems from HyMedPoly are aimed at applications such as wound care, implants and bio film prevention.

Requirements:

We seek a person with strong motivation and the ability to define his/her own research questions.
The applicant must hold:

- a master degree in Materials Science/Engineering or Chemistry. The applicant must have earned the degree prior to 31/07/2015
- Certificate of English language knowledge. Recognized certificates:
  IELTS with a minimum score of 5.0;
  TOEFL ibt with a minimum score of 77 - cbt with a minimum score of 210 - pbt with a minimum score of 547;
  Cambridge ESOL examinations - General English exams: minimum level accepted is PET pass with merit;

Otherwise, a certificate stating that students have obtained Bachelor or Master degree, in which English was used as medium of instruction, certifying that “The medium of instruction is English”. Citizens of countries, in which English is one of the official languages, are exempted from providing any language certificate.
The call for admission can be submitted even if the above certificates have not yet been obtained, but applicants shall obtain one of them before the deadline for enrolment expires. In this event, the admission to selection procedures will be subjected to the obtainment of one of the above certificates; the failure to submit the said certificate in phase of enrolment shall entail the loss of the right to enroll.
Applicants shall, at the time of recruitment, be in the first four years (full-time equivalent research experience) of their research careers and not yet have been awarded a doctoral degree. Full-Time Equivalent Research Experience is measured from the date when a researcher obtained the degree which would formally entitle him/her to embark on a doctorate. In addition, at the time of recruitment, applicants must not have resided or carried out their main activity (work, studies, etc.) in Germany for more than 12 months in the 3 years immediately prior to the recruitment date. Compulsory national service and/or short stays such as holidays are not taken into account.

Important characteristics of the new European Industrial Doctorate programme are:

- you will be jointly supervised by academia and industry supervisors
- you are required to spend 50% of the time in your registered university in Germany (University of Erlangen-Nuremberg- www.fau.de), and 50% time with the industrial research organisation, Lucideon Limited (www.lucideon.com) in Stoke-on-Trent, United Kingdom.

Personal Qualities:

- Excellent collaborative and teamwork skills
- Full command of written and oral English
- Strong dedication and self-motivation

We offer:

- Competitive salary in a 3 year full time position
- High working capacity
- An excellent training environment at the University of Erlangen-Nuremberg and Lucideon Limited.

FRIEDRICH-ALEXANDER UNIVERSITÄT ERLANGEN-NÜRNBERG

Founded in 1743, Friedrich-Alexander University of Erlangen-Nuremberg (FAU) is one of the largest research universities in Germany with around 38,000 students. The five faculties cover the entire spectrum of modern academic disciplines – from humanities, social sciences and theology to medicine, law, economics, sciences and engineering. The Institute of Biomaterials in the Department of Materials Science and Engineering, where this project will be carried out, is an internationally recognized research establishment conducting a broad range of research activities in the field of biomaterials for medical devices, tissue engineering and drug delivery.

LUCIDEON

Lucideon is an international, independent materials technology company that applies its materials expertise in ceramics, metals and polymers to a range of sectors including healthcare, construction, ceramics, aerospace and power engineering. From our state-of-the-art facilities in the UK, US and the Far East, we provide customised solutions to help companies measurably improve performance, profitability and sustainability – of materials, products and of business.

Evaluation and Application:

Competences of applicants will be assessed on the basis of the evaluation of their educational and research background.

The Application must include:

- Application letter detailing the reasons for applying
- CV (summarizing education, positions and academic work - scientific publications)
- A 1-page Personal Statement outlining your research interests, research experience, academic achievements and career ambitions.
- Copies of educational certificates and transcript of records
- Details of internationally recognized language qualifications achieved
- List of publications and academic work that the applicant wishes to be considered by the evaluation committee
- Names and contact details of 2-3 references (name, relation to candidate, e-mail and telephone number). One or more letters of reference may be included

JOB VACANCY: Novel Antibacterial Agents for Innovative Antibacterial Polymers (HyMedPoly ESR10)

The HyMedPoly project, “Drug-Free Antibacterial Hybrid Biopolymers for Medical Applications”, has received funding from the European Union’s Horizon 2020 research and innovation programme under the Marie Sklodowska-Curie grant agreement No *643050* for European Industrial Doctorate.

A **3 year PhD position** is available at the **University of Westminster, London, UK**

Please submit your application as detailed below through the project website:
http://hymedpoly.eu/open-positions/

Deadline for application: 15th July 2015

Job Description:

The recruited candidate will pursue research work on the development of novel antibacterial agents which can be used as additives to create innovative antibacterial polymers. With declining antibiotic efficiency and development of “super bugs”, combined with an ageing population, there is a huge demand for new advanced therapies including development of antibacterial materials. Most current antibacterial materials contain drugs or active factors which then induce the development of antibiotic resistant bacteria. In this project we will aim to develop antibacterial agents with a relatively novel mechanism of antibacterial activity. These will then be used to modify and functionalize biocompatible polymers in order to produce a new family of antibacterial materials. Various approaches towards identification and development of novel antibacterial agents will include the development of inhibitors of essential bacterial proteases that are crucial for the pathogenicity of the bacteria and use of quorum quenchers to prevent biofilm development.

The candidate will start with the identification, production and characterization of novel antibacterial agents including bacterial protease inhibitors and quorum quenchers. Once such agents have been successfully identified and characterized, these will be used as additives for various biocompatible polymers including PLLA, PLGA, PCL and PHAs. The PHAs will be produced by the candidate using bacterial fermentation at the University of Westminster, whereas the other polymers will either be bought or obtained from other partners within the consortium. The polymers produced will be suitably functionalized with the novel antibacterial agents and thoroughly characterized with respect to chemical, thermal, biocompatibility and antibacterial properties. The final developed materials will be subjected to preclinical testing. The candidate will spend 18 months of the project at the University of Westminster, UK and remaining 18 months in Universitätsklinikum Knappschaftskrankenhaus Bochum, Germany, with clinical expertise. The project should output some novel scientific/clinical contribution along with the development of intellectual property.

During the 3 years project period, the recruited PhD candidate will be enrolled by the Faculty of Science and Technology, Department of Life Sciences, University of Westminster, UK and will work within the Biomaterials section of the Applied Biotechnology Research Group led by Dr Ipsita Roy (http://www.westminster.ac.uk/about-us/our-people/directory/roy-ipsita), an internationally leading group in bacteria derived biopolymers. Experimental work will be carried out both at the University of Westminster (London, UK, Academic host) and Universitätsklinikum Knappschaftskrankenhaus Bochum, Germany (Clinical Host).

Additional Information about HyMedPoly:

Infection has become one of the toughest problems in the medical world. As bacteria become more resistant to drugs, there are fewer effective antibiotics to fight against pathogens.

HyMedPoly aims to develop new therapies based on biomedical polymers and inorganic materials. 10 universities and companies from across Europe are creating a cohort of 15 European Industrial Doctorates to synthesize new biopolymers with added antibacterial functionality and develop functionalized bioactive ceramics and glasses that can act as active agents to kill bacteria and prevent their growth.

The new material systems from HyMedPoly are aimed at applications such as wound care, implants and bio film prevention.

Requirements:

We seek a person with strong motivation and the ability to define his/her own research questions. The applicant must hold a Master's degree in Biochemistry, Biotechnology or a related Master of Science degree and good written and oral communication skills in English. Industrial experience in the areas of microbial biotechnology and/or enzymology is also relevant. Applicants shall, at the time of recruitment, be in the first four years (full-time equivalent research experience) of their research careers and not yet have been awarded a doctoral degree. Full-Time Equivalent Research Experience is measured from the date when a researcher obtained the degree which would formally entitle him/her to embark on a doctorate. In addition, at the time of recruitment, applicants must not have resided or carried out their main activity (work, studies, etc.) in the UK for more than 12 months in the 3 years immediately prior to the recruitment date. Compulsory national service and/or short stays such as holidays are not taken into account.

Important characteristics of the new European Industrial Doctorate programme are:

- you will be jointly supervised by academia and clinical/industrial supervisors
- you are required to spend 50% of the time in your registered university in the United Kingdom (University of Westminster- www.westminster.ac.uk) and 50% time with the industrial research organization, Vornia (www.vornia.com) in Galway, Ireland.

Personal Qualities:

- Excellent collaborative and teamwork skills
- Strong dedication and self-motivation
- Certificate of English language knowledge.

IELTS with a minimum score of 6.5 and no lower than 6.0 in any individual component is required for all candidates for whom English is not their first/native language.

The application for admission can be submitted even if the above certificates have not yet been obtained, but applicants shall obtain one of them before the deadline for enrolment expires. In this event, the admission to selection procedures will be subject to the obtainment of one among the above certificates; the failure to submit the said certificate during enrolment shall entail the loss of the right to enroll.

We offer:

- Competitive salary in a 3 year full time position (3740 €/month)
- Mobility and family allowance (600 or 1100 €/month depending on the researcher's family situation)
- High working capacity
- An excellent and intersectorial training environment at the academic host, University of Westminster, London, UK and clinical host, Universitätsklinikum Knappschaftskrankenhaus Bochum, Germany

UNIVERSITY OF WESTMINSTER

The University of Westminster's most strategic mission is to create a high quality academic environment where researchers and students from all over the world can study, work and collaborate on innovative and challenging projects. At the University of Westminster we pride ourselves on our record of excellence in research that makes a difference – to academia, to the professions, to business, to industry. We have a rich and diverse profile of activity across a broad range of subjects and as highly as we value pure academic research, we are equally committed to ensuring that our knowledge delivers real-world benefits, through knowledge transfer and applied research. (www.westminster.ac.uk)

The University Medical Center "Knappschaftskrankenhaus" Bochum, Germany (Medical partner), an affiliate of the University Hospital Ruhr-University Bochum (RUB), is a 485-bed healthcare facility. Each year around 22,000 patients receive hospital treatment. The Knappschaftskrankenhaus is a supraregional trauma centre Level I and additionally evaluated and certified as endoprostheses centre. Overall 9 disciplines are consolidated within this Centre and it contains 4 further special healthcare centres, e.g. epilepsy, oncology, stroke, and kidney and pancreas transplantation. Several clinical disciplines have research units and labs at the Center of Clinical Research at the Ruhr-University Bochum. The "Medical Biomaterials" research unit within this Centre is involved in this project. (http://www.kk-bochum.de)

Evaluation and Application:

Competences of applicants will be assessed on the basis of the evaluation of their educational and research background, according to the following requirements:

Required Research Experiences:

Main Research Field: Biochemistry

Sub Research Field: Microbiology/Biopolymers/Biomaterials/Biotechnology

Additional Requirements

- Hands-on experience in enzyme biochemistry, characterization of enzyme inhibitors, microbiology, small molecule isolation and characterization

The Application must include:

- Application letter detailing the reasons for applying
- CV (summarizing education, positions and academic work - scientific publications and any other relevant experience)
- A 1-page Personal Statement outlining your research interests, research experience, academic achievements and career ambitions.
- Copies of educational certificates and transcript of records
- Details of internationally recognized language qualifications achieved

- List of publications and academic work that the applicant wishes to be considered by the evaluation committee
- Names and contact details of 2-3 references (name, relation to candidate, e-mail and telephone number). One or more letters of reference may be included

JOB VACANCY: Antibacterial Materials for Tissue Engineering Scaffolds (HyMedPolyESR11)

The HyMedPoly project, “Drug-Free Antibacterial Hybrid Biopolymers for Medical Applications”, has received funding from the European Union’s Horizon 2020 research and innovation programme under the Marie Sklodowska-Curie grant agreement No *643050* for European Industrial Doctorate.

A **3 year PhD position** is available at the **University of Westminster, London, UK**

Please submit your application as detailed below through the project website:
http://hymedpoly.eu/open-positions/

Deadline for application: 15th July 2015

Job Description:
The recruited candidate will pursue research work on the development of novel antibacterial materials and their use in the development of tissue engineering scaffold structures using electrospinning/3D printing. With declining antibiotic efficiency and development of “super bugs”, combined with an ageing population, there is a huge demand for new advanced therapies including development of antibacterial materials. Most current antibacterial materials contain drugs or active factors which then induce the development of antibiotic

resistant bacteria. In this project we will aim to develop antibacterial materials using novel antibacterial agents such as enzymes, bacterial protease inhibitors and quorum quenchers. These will then be used to modify and functionalize biocompatible polymers in order to produce a new family of antibacterial materials which in turn will be processed to form 2D and 3D tissue engineering scaffold structures.

The candidate will isolate novel antibacterial agents including enzymes, bacterial protease inhibitors and quorum quenchers. Once such agents have been successfully isolated and characterized, these will be used as additives for Polyhydroxyalkanoates (PHAs), bacteria-derived biocompatible and biodegradable polymers. The PHAs will be produced by the candidate using bacterial fermentation at the University of Westminster. These will then be suitably functionalized with a chosen novel antibacterial agent and thoroughly characterized with respect to chemical, thermal, biocompatibility and antibacterial properties. The novel developed material will then be processed to form 2D-, 3D tissue engineering scaffolds which will be subjected to preclinical testing. The candidate will spend 18 months of the project at the University of Westminster, UK and remaining 18 months in Universitätsklinikum Knappschaftskrankenhaus Bochum, Germany, with clinical expertise. The project should output some novel scientific/clinical contribution along with the development of intellectual property.

During the 3 years project period, the recruited ESR will be enrolled by the Faculty of Science and Technology, Department of Life Sciences, University of Westminster, UK and will work within the Biomaterials section of the Applied Biotechnology Research Group led by Dr Ipsita Roy (http://www.westminster.ac.uk/about-us/our-people/directory/roy-ipsita), an internationally leading group in bacteria derived biopolymers. The experimental work will be carried out both at the University of Westminster (London, UK, Academic host) and Universitätsklinikum Knappschaftskrankenhaus Bochum, Germany (Clinical Host).

Additional Information about HyMedPoly:

Infection has become one of the toughest problems in the medical world. As bacteria become more resistant to drugs, there are fewer effective antibiotics to fight against pathogens.

HyMedPoly aims to develop new therapies based on biomedical polymers and inorganic materials. 10 universities and companies from across Europe are creating a cohort of 15 European Industrial Doctorates to synthesis new biopolymers with added antibacterial functionality and develop functionalized bioactive ceramics and glasses that can act as active agents to kill bacteria and prevent their growth.

The new material systems from HyMedPoly are aimed at applications such as wound care, implants and bio film prevention.

Requirements:

We seek a person with strong motivation and the ability to define his/her own research questions. The applicant must hold a Master's degree in Biochemistry, Biotechnology, Biomaterials, or a related Master of Science degree and good written and oral communication skills in English. Industrial experience in the areas of Microbial Biotechnology and Biochemistry is also relevant. Applicants shall, at the time of recruitment, be

in the first four years (full-time equivalent research experience) of their research careers and not yet have been awarded a doctoral degree. Full-Time Equivalent Research Experience is measured from the date when a researcher obtained the degree which would formally entitle him/her to embark on a doctorate. In addition, at the time of recruitment, applicants must not have resided or carried out their main activity (work, studies, etc.) in the UK for more than 12 months in the 3 years immediately prior to the recruitment date. Compulsory national service and/or short stays such as holidays are not taken into account.

Important characteristics of the new European Industrial Doctorate programme are:

- you will be jointly supervised by academia and clinical/industrial supervisors
- you are required to spend 50% of the time in your registered university in the United Kingdom (University of Westminster- www.westminster.ac.uk) and 50% time with the industrial research organization, Vornia (www.vornia.com) in Galway, Ireland.

Personal Qualities:

- Excellent collaborative and teamwork skills
- Strong dedication and self-motivation
- Certificate of English language knowledge. Recognized certificates:
- Certificate of English language knowledge.

IELTS with a minimum score of 6.5 and no lower than 6.0 in any individual component is required for all candidates for whom English is not their first/native language.

The application for admission can be submitted even if the above certificates have not yet been obtained, but applicants shall obtain one of them before the deadline for enrolment expires. In this event, the admission to selection procedures will be subject to the obtainment of one among the above certificates; the failure to submit the said certificate during enrolment shall entail the loss of the right to enroll.

We offer:

- Competitive salary in a 3 year full time position (3740 €/month)
- Mobility and family allowance (600 or 1100 €/month depending on the researcher's family situation)
- High working capacity
- An excellent and intersectorial training environment at the academic host University of Westminster, London, UK and clinical host Universitätsklinikum Knappschaftskrankenhaus Bochum, Germany

UNIVERSITY OF WESTMINSTER

The University of Westminster's most strategic mission is to create a high quality academic environment where researchers and students from all over the world can study, work and collaborate on innovative and challenging projects. At the University of Westminster we pride ourselves on our record of excellence in research that makes a difference – to academia, to the professions, to business, to industry. We have a rich and diverse profile of activity across a broad range of subjects and as highly as we value pure academic

research, we are equally committed to ensuring that our knowledge delivers real-world benefits, through knowledge transfer and applied research. (www.westminster.ac.uk)

The University Medical Center "Knappschaftskrankenhaus" Bochum, Germany (Medical partner), an affiliate of the University Hospital Ruhr-University Bochum (RUB), is a 485-bed healthcare facility. Each year around 22,000 patients receive hospital treatment. The Knappschaftskrankenhaus is a supraregional trauma centre Level I and additionally evaluated and certified as endoprostheses centre. Overall 9 disciplines are consolidated within this Centre and it contains 4 further special healthcare centres, e.g. epilepsy, oncology, stroke, and kidney and pancreas transplantation. Several clinical disciplines have research units and labs at the Center of Clinical Research at the Ruhr-University Bochum. The "Medical Biomaterials" research unit within this Centre is involved in this project. (http://www.kk-bochum.de)

Evaluation and Application:

Competences of applicants will be assessed on the basis of the evaluation of their educational and research background, according to the following requirements:

Required Research Experiences:

Main Research Field: Biochemistry

Sub Research Field: Microbiology/Biopolymers/Biomaterials/Biotechnology

Additional Requirements

- Hands-on experience in enzyme biochemistry, characterization of enzyme inhibitors, microbiology, small molecule isolation and characterization
- Some experience with biomaterials is desirable

The Application must include:

- Application letter detailing the reasons for applying
- CV (summarizing education, positions and academic work - scientific publications and any other relevant experience)
- A 1-page Personal Statement outlining your research interests, research experience, academic achievements and career ambitions.
- Copies of educational certificates and transcript of records
- Details of internationally recognized language qualifications achieved
- List of publications and academic work that the applicant wishes to be considered by the evaluation committee

- Names and contact details of 2-3 references (name, relation to candidate, e-mail and telephone number). One or more letters of reference may be included

JOB VACANCY: Mechanobiology of Cell-Surface Interaction (HyMedPoly ESR12)

The HyMedPoly project, "Drug-Free Antibacterial Hybrid Biopolymers for Medical Applications", has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Sklodowska-Curie grant agreement No *643050* for doctoral training.

A **3 year PhD position in the area of mechanobiology of cell-surface interaction** is available at the **University of Southampton**

Please submit your application as detailed below through the project website:
http://hymedpoly.eu/open-positions/

Deadline for application: 02 August 2015

Job Description:

The recruited PhD student will pursue research in the highly inter-disciplinary area of computational and experimental mechano-biology of cell-structure adhesion, proliferation, growth and morphogenesis. This is an exciting project lying at the interface of mechanics, modeling, bio-tribology and biophysics. The doctoral work will focus on gaining a sound scientific understanding of the role of architecture, compliance and surface properties in cell response, e.g. adhesion, growth and subsequent biofilm formation, in order to harness the knowledge for anti-bacterial applications. A strong background in a numerate discipline (engineering, physics, applied mathematics or theoretical chemistry) with computational as well as experimental interests is essential.

The experimental work will be carried out at the industrial partners (Lucideon, Fraunhofer and Universitätsklinikum Knappschaftskrankenhaus Bochum, Germany). Computational and theoretical modeling will be carried out primarily at the University of Southampton.

Professor Atul Bhaskar within the Computational Engineering research group at the Faculty of Engineering and the Environment is the academic supervisor. Additionally, there will be industrial supervisors co-supervising the doctoral work.

Additional Information about HyMedPoly:

Infection has become one of the toughest problems in the medical world. As bacteria become more resistant to drugs, there are fewer effective antibiotics to fight against pathogens.

HyMedPoly aims to develop novel therapies and approaches using a class of biomedical polymers and inorganic materials. 10 leading universities and companies from across Europe are creating a cohort of 15 doctoral researchers leading to a PhD within the European Industrial Doctorates programme to synthesise, characterize and simulate the behavior of new biopolymers. The added antibacterial functionality derived from functionalized bioactive ceramics and glasses can act as active agents to kill bacteria, prevent their growth and biofilm formation.

The study will aim at the product development for applications such as wound care, implants and endoprostheses.

Important characteristics of the new European Industrial Doctorate programme are:

- you will be jointly supervised by academia and industry supervisors
- you are required to spend 50% of the time at the university of Southampton and a combined 50% time at the industrial research organisations Lucideon, Fraunhofer IPA and the clinical partner Universitätsklinikum Knappschaftskrankenhaus Bochum, Germany.

Requirements:

We seek a person with strong motivation and the ability to define his/her own research questions.
The applicant must hold:

- A bachelor's degree, normally with at least class 2(i) or equivalent, in a relevant subject.
- An excellent master's degree in a numerate discipline (engineering, applied mathematics, physics, or theoretical chemistry) is essential. Good programming skills and a flair for mathematical modelling are required. The applicants must have earned the degree prior to joining the doctoral programme (by end of September 2015).
- Interest in carrying out laboratory experiments is expected.
- Certificate of English language proficiency (of Band C minimum). Details of the requirement are given in the link below:

http://www.southampton.ac.uk/studentadmin/admissions/admissionspolicies/language/?utm_source=ugprospectus&utm_medium=print&utm_campaign=undergraduate-2015

Applicants shall, at the time of recruitment, be in the first four years (full-time equivalent research experience) of their research careers and not yet have been awarded a doctoral degree. Full-Time Equivalent Research Experience is measured from the date when a researcher obtained the degree which would formally entitle him/her to embark on a doctorate. In addition, at the time of recruitment, applicants must not have resided or carried out their main activity (work, studies, etc.) in the UK for more than 12 months in the 3 years immediately prior to the recruitment date. Compulsory national service and/or short stays such as holidays are not taken into account.

Personal Qualities:

- Excellent collaborative and teamwork skills
- Strong dedication and self-motivation

Applications can be submitted even if the above certificates have not yet been obtained. However in order for a successful candidate to commence the PhD programme, they must have obtained their Master's degree, and be able to provide evidence of this, and also provide their certificate of English Language proficiency, before the agreed start date.

We offer:

- Competitive salary in a 3 year full time position (€3740 per month approx.)
- Mobility allowance as per rules
- An exciting training environment at the University of Southampton, Lucideon (UK) , Fraunhofer, Germany and Universitätsklinikum Knappschaftskrankenhaus Bochum (Bochum, Germany)

University of Southampton is ranked in the top 1% of the universities worldwide with particular strengths in sciences and engineering. The university is a part of the prestigious Russell Group of the UK universities and also one of the 5 elite SES-5 (Science and Engineering South consortium) institutions (the other 4 being Cambridge, Oxford, UCL and Imperial College, London). The research work will be carried out at the Faculty of Engineering and the Environment within Computational Engineering Research Group. The Faculty came out at the top for General Engineering in the recent round of Research Assessment Exercise (RAE) in the UK on the measure of 'research power' which combines the quality and the quantity of research outputs:

(http://www.southampton.ac.uk/engineering/news/2014/12/18_ref_2014_engineering_results.page)

The research income of the university exceeds £100 million annually with the current value of funding from Engineering and Physical Sciences Research Council (EPSRC) in excess of £200 million. The university has consistently been in the top-5 within the UK on various league tables for engineering—often occupying the top spot in the subject rankings for various engineering programmes.

Lucideon is an international, independent materials technology company that applies its materials expertise in ceramics, metals and polymers to a range of sectors including healthcare, construction, ceramics, aerospace and power engineering. From our state-of-the-art facilities in the UK, US and the Far East, we provide customised solutions to help companies measurably improve performance, profitability and sustainability – of materials, products and of business (www.lucideon.com) .

The **Fraunhofer-Gesellschaft** is the leading organization for applied research in Europe. Its research activities are conducted by 66 institutes and research units at locations throughout Germany. The Fraunhofer-Gesellschaft employs a staff of nearly 24,000, who work with an annual research budget totaling more than 2 billion euros. Of this sum, around 1.7 billion euros is generated through contract research. More than 70 percent of the Fraunhofer-Gesellschaft's contract research revenue is derived from contracts with industry and from publicly financed research projects. International collaborations with excellent research partners and innovative companies around the world ensure direct access to regions of the greatest importance to present and future scientific progress and economic development. The Fraunhofer IPA has had decades of experience in the field of medicine and biotechnology. Our service

portfolio includes consulting services, the development of tools, equipment and facilities as well as technology and process developments or conversions.

The **University Medical Center "Knappschaftskrankenhaus" Bochum**, an affiliate of the University Hospital Ruhr-University Bochum (RUB), is a 485-bed healthcare facility. Each year around 22,000 patients are getting a hospital treatment and ca. 47,000 are treated non-steady (ambulance or emergency room). The Knappschaftskrankenhaus is a supra-regional trauma centre Level I and additionally evaluated and certified as endoprostheses centre. Overall, nine disciplines are consolidated and it contains four further special healthcare centres, e.g. epilepsy, oncology, stroke, and kidney and pancreas transplantation. Several clinical disciplines keep research units and labs at the Centre of Clinical Research at the Ruhr-University Bochum. One of such units is the research group "Medical Biomaterials" involved in the mentioned project.

Evaluation and Application:

Competences of applicants will be assessed on the basis of the evaluation of their educational and research background. The successful candidate must have a strong theoretical and computational background. Additionally, willingness to carry out laboratory experiments is essential.

The Application must include:

- Application letter detailing the reasons for applying
- CV (summarizing education, positions held and academic work - scientific publications)
- A 1-page Personal Statement outlining your research interests, research experience, academic achievements and career ambitions.
- Copies of educational certificates and transcript of records
- Details of internationally recognized language qualifications achieved
- List of publications and academic work that the applicant wishes to be considered by the evaluation committee
- Names and contact details of 2-3 references (name, relation to candidate, e-mail and telephone number). One or more letters of reference may be included

JOB VACANCY : Mechanics of Porous and Structured Materials (HyMedPoly ESR 13)

The HyMedPoly project, “Drug-Free Antibacterial Hybrid Biopolymers for Medical Applications”, has received funding from the European Union’s Horizon 2020 research and innovation programme under the Marie Sklodowska-Curie grant agreement No *643050* for doctoral training.

A **3 year PhD position in the area of porous and structured materials for medical implants** is available at the **University of Southampton**

Please submit your application as detailed below through the project website:
http://hymedpoly.eu/open-positions/

Deadline for application: 02 August 2015

Job Description:

The recruited PhD student will pursue research in the highly inter-disciplinary area of computational and experimental mechanics of porous and structured materials. This is an exciting project lying at the interface of mechanics, modeling, and material science. The project will focus on the apparent properties of porous materials and their relationship with the internal architecture. Additive manufacturing methods such as 3D-printing will be considered. A strong background in a numerate discipline (engineering, physics, applied mathematics or materials science) with computational as well as experimental interests is essential.

The experimental work will be carried out at the industrial partners (Lucideon Ltd, UK and Fraunhofer Germany). Computational and theoretical modeling will be carried out primarily at the University of Southampton.

Professor Atul Bhaskar within the Computational Engineering research group at the Faculty of Engineering and the Environment is the academic supervisor. Additionally, there will be industrial supervisors co-supervising the doctoral work.

Additional Information about HyMedPoly:

Infection has become one of the toughest problems in the medical world. As bacteria become more resistant to drugs, there are fewer effective antibiotics to fight against pathogens.

HyMedPoly aims to develop novel therapies and approaches using a class of biomedical polymers and inorganic materials. 10 leading universities and companies from across Europe are creating a cohort of 15 doctoral researchers leading to a PhD within the European Industrial Doctorates scheme to synthesise, characterize and simulate the behavior of new biopolymers. The added antibacterial functionality derived from functionalized bioactive ceramics and glasses can act as active agents to kill bacteria, prevent their growth and biofilm formation.

The study will aim at the product development for applications such as wound care, implants and endoprostheses.

Important characteristics of the new European Industrial Doctorate programme are:

- you will be jointly supervised by academia and industry supervisors
- You are required to spend 50% of the time at the university of Southampton and a combined 50% time at the industrial research organisations Lucideon, Fraunhofer IPA, Germany.

Requirements:

We seek a person with strong motivation and the ability to define his/her own research questions.
The applicant must hold:

- A bachelor's degree, normally with at least class 2(i) or equivalent, in a relevant subject is required
- An excellent master's degree in a numerate discipline (engineering, applied mathematics, physics, or theoretical material science) is essential. Good programming skills and a flair for mathematical modelling are required. The applicants must have earned the degree prior to joining the doctoral programme (by end of September 2015).
- Interest in carrying out laboratory experiments is expected.
- Familiarity/experience with material testing is desirable
- Certificate of English language proficiency (of Band C minimum). Details of the requirements are given in the link below:

http://www.southampton.ac.uk/studentadmin/admissions/admissionspolicies/language/?utm_source=ugprospectus&utm_medium=print&utm_campaign=undergraduate-2015

Applicants shall, at the time of recruitment, be in the first four years (full-time equivalent research experience) of their research careers and not yet have been awarded a doctoral degree. Full-Time Equivalent Research Experience is measured from the date when a researcher obtained the degree which would formally entitle him/her to embark on a doctorate. In addition, at the time of recruitment, applicants must not have resided or carried out their main activity (work, studies, etc.) in the UK for more than 12 months in the 3 years immediately prior to the recruitment date. Compulsory national service and/or short stays such as holidays are not taken into account.

Personal Qualities:

- Excellent collaborative and teamwork skills

- Strong dedication and self-motivation

Applications can be submitted even if the above certificates have not yet been obtained. However in order for a successful candidate to commence the PhD programme, they must have obtained their Master's degree, and be able to provide evidence of this, and also provide their certificate of English Language proficiency, before the agreed start date.

We offer:

- Competitive salary in a 3 year full time position (€3740 per month approx.)
- Mobility allowance as per rules
- An exciting training environment at the University of Southampton, Lucideon, UK and Fraunhofer, Germany.

University of Southampton is ranked in the top 1% of the universities worldwide with particular strengths in sciences and engineering. The university is a part of the prestigious Russell Group of the UK universities and also one of the 5 elite SES-5 (Science and Engineering South consortium) institutions (the other 4 being Cambridge, Oxford, UCL and Imperial College, London). The research work will be carried out at the Faculty of Engineering and the Environment within Computational Engineering Research Group. The Faculty came out at the top for General Engineering in the recent round of Research Assessment Exercise (RAE) in the UK on the measure of 'research power' which combines the quality and the quantity of research outputs:

(http://www.southampton.ac.uk/engineering/news/2014/12/18_ref_2014_engineering_results.page)

The research income of the university exceeds £100 million annually with the current value of funding from Engineering and Physical Sciences Research Council (EPSRC) in excess of £200 million. The university has consistently been in the top-5 within the UK on various league tables for engineering—often occupying the top spot in the subject rankings for various engineering programmes.

Lucideon is an international, independent materials technology company that applies its materials expertise in ceramics, metals and polymers to a range of sectors including healthcare, construction, ceramics, aerospace and power engineering. From our state-of-the-art facilities in the UK, US and the Far East, we provide customised solutions to help companies measurably improve performance, profitability and sustainability – of materials, products and of business (www.lucideon.com) .

The **Fraunhofer-Gesellschaft** is the leading organization for applied research in Europe. Its research activities are conducted by 66 institutes and research units at locations throughout Germany. The Fraunhofer-Gesellschaft employs a staff of nearly 24,000, who work with an annual research budget totaling more than 2 billion euros. Of this sum, around 1.7 billion euros is generated through contract research. More than 70 percent of the Fraunhofer-Gesellschaft's contract research revenue is derived from contracts with industry and from publicly financed research projects. International collaborations with excellent research partners and innovative companies around the world ensure direct access to regions of the greatest importance to present and future scientific progress and economic development. The Fraunhofer IPA has had decades of experience in the field of medicine and biotechnology. Our service portfolio includes consulting services, the development of tools, equipment and facilities as well as technology and process developments or conversions.

Evaluation and Application:

Competences of applicants will be assessed on the basis of the evaluation of their educational and research background. The successful candidate must have a strong theoretical and computational background. Additionally, willingness to carry out laboratory experiments is essential.

The Application must include:

- Application letter detailing the reasons for applying
- CV (summarizing education, positions held and academic work - scientific publications)
- A 1-page Personal Statement outlining your research interests, research experience, academic achievements and career ambitions.
- Copies of educational certificates and transcript of records
- Details of internationally recognized language qualifications achieved
- List of publications and academic work that the applicant wishes to be considered by the evaluation committee
- Names and contact details of 2-3 references (name, relation to candidate, e-mail and telephone number). One or more letters of reference may be included

JOB VACANCY: In-vitro Bio-evaluation of Antibacterial Polymers (HyMedPoly ESR 14)

The HyMedPoly project, “Drug-Free Antibacterial Hybrid Biopolymers for Medical Applications”, has received funding from the European Union’s Horizon 2020 research and innovation programme under the Marie Sklodowska-Curie grant agreement No *643050* for European Industrial Doctorate.

A **3 year PhD position** is available at the **Politecnico di Torino**

Please submit your application as detailed below through the project website:
http://hymedpoly.eu/open-positions/

Deadline for application: 15 July 2015

Job Description:

The recruited ESR will pursue research work on in vitro bio-evaluation of polymers synthesized in the project.

The major objective is to develop and apply novel methodology for the evaluation of antibacterial properties of porous and non-porous polymeric material. The ESR will perform also cytotoxicity tests on novel antibacterial polymer. Polymer films and scaffolds with different topography and porosity will be manufactured to show the effect of material surface morphology on bacterial growth and biofilm formation.

During the 3 years project period, the recruited ESR will be enrolled by the School of Doctorate at Politecnico di Torino. The experimental work will be carried out at Politecnico (academic host) and at Universitätsklinikum Knappschaftskrankenhaus Bochum (Bochum, Germany- non academic partner)

Additional Information about HyMedPoly:

Infection has become one of the toughest problems in the medical world. As bacteria become more resistant to drugs, there are fewer effective antibiotics to fight against pathogens.

HyMedPoly aims to develop new therapies based on biomedical polymers and inorganic materials. 10 universities and companies from across Europe are creating a cohort of 15 European Industrial Doctorates to synthesise new biopolymers with added antibacterial functionality and develop functionalized bioactive ceramics and glasses that can act as active agents to kill bacteria, prevent their growth and biofilm formation.

The new material systems from HyMedPoly are aimed at applications such as wound care, implants and endoprostheses.
Important characteristics of the new European Industrial Doctorate programme are:

- you will be jointly supervised by academia and industry supervisors
- you are required to spend 50% of the time in your registered university in Italy and 50% time with the industrial research organisation Universitätsklinikum Knappschaftskrankenhaus Bochum (Bochum, Germany) which serves as clinical partner too.

Requirements:

We seek a person with strong motivation and the ability to define his/her own research questions.
The applicant must hold:

- a master degree in one of the following disciplines: Biomedical Engineering, Biology, Medicinal and Industrial Pharmaceutical Sciences or a related Master of Science degree. The applicant must have earned the degree prior to 31/07/2015
- Certificate of English language knowledge. Recognized certificates:
- IELTS with a minimum score of 5.0;
- TOEFL ibt with a minimum score of 77 - cbt with a minimum score of 210 - pbt with a minimum score of 547;
- Cambridge ESOL examinations - General English exams: minimum level accepted is PET pass with merit;

Otherwise, a certificate stating that students have obtained Bachelor or Master degree, in which English was used as medium of instruction, certifying that “The medium of instruction is English”.
Citizens of countries, in which English is one of the official languages, are exempted from providing any certificate.
The call for admission can be submitted even if the above certificates have not yet been obtained, but applicants shall obtain one of them before the deadline for enrolment expires. In this event, the admission to selection procedures will be subject to the obtainment of one among the above certificates; the failure to submit the said certificate in phase of enrolment shall entail the loss of the right to enroll.

Applicants shall, at the time of recruitment, be in the first four years (full-time equivalent research experience) of their research careers and not yet have been awarded a doctoral degree. Full-Time Equivalent Research Experience is measured from the date when a researcher obtained the degree which would formally entitle him/her to embark on a doctorate. In addition, at the time of recruitment, applicants must not have resided or carried out their main activity (work, studies, etc.) in Italy for more than 12 months in the 3 years immediately prior to the recruitment date. Compulsory national service and/or short stays such as holidays are not taken into account.

Personal Qualities:

- Excellent collaborative and teamwork skills
- Strong dedication and self-motivation

We offer:

- Competitive salary in a 3 year full time position
- High working capacity
- An excellent training environment at Politecnico di Torino and Universitätsklinikum Knappschaftskrankenhaus Bochum (Bochum, Germany)

POLITO most strategic mission is to create a high quality academic environment where researchers and students from all over the world can study, work and collaborate on innovative and challenging projects. The Politecnico di Torino has been acknowledged by the European Commission for its "HR Excellence in Research", being committed to the implementation of the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers. The Politecnico di Torino has set the investment in Human Resources for Research as one of the priorities of the Strategic Plan 'Horizon 2020'. Dedicated actions are implemented to attract international top professors and researchers and to invest in young talented researchers in specific strategic areas.

The University Medical Center "Knappschaftskrankenhaus" Bochum GmbH, Germany (Medical partner and owned by the Knappschafts insurance Bahn & See), an affiliate of the University Hospital Ruhr-University Bochum (RUB), is a 485-bed healthcare facility. Each year around 22,000 patients receive hospital treatment. The Knappschaftskrankenhaus is a supraregional trauma centre Level I and additionally evaluated and certified as endoprostheses centre. Overall 9 disciplines are consolidated within this Centre and it contains 4 further special healthcare centres, e.g. epilepsy, oncology, stroke, and kidney and pancreas transplantation. Several clinical disciplines have research units and labs at the Centre of Clinical Research at the Ruhr-University Bochum. The "Medical Biomaterials" research unit within this Centre is involved in this project.

Evaluation and Application:

Competences of applicants will be assessed on the basis of the evaluation of their educational and research background. The successful candidate should be familiar with general cell biology laboratory techniques and have direct working experiences in handling cell culture and bacteriological studies, with a preference for experience evaluating novel antibacterial compounds. Additional Requirements: experience in surface engineering (including micro- and nanostructuring) and surface characterization.

The Application must include:

- Application letter detailing the reasons for applying
- CV (summarizing education, positions and academic work - scientific publications)
- A 1-page Personal Statement outlining your research interests, research experience, academic achievements and career ambitions.

- Copies of educational certificates and transcript of records
- Details of internationally recognized language qualifications achieved
- List of publications and academic work that the applicant wishes to be considered by the evaluation committee
- Names and contact details of 2-3 references (name, relation to candidate, e-mail and telephone number). One or more letters of reference may be included

JOB VACANCY: Antibacterial testing of Polymers (HyMedPoly ESR 15)

The HyMedPoly project, “Drug-Free Antibacterial Hybrid Biopolymers for Medical Applications”, has received funding from the European Union’s Horizon 2020 research and innovation programme under the Marie Sklodowska-Curie grant agreement No *643050* for European Industrial Doctorate.

A **3 year PhD position** is available at the **Politecnico di Torino**

Please submit your application as detailed below through the project website:
http://hymedpoly.eu/open-positions/

Deadline for application: 15 July 2015

Job Description:

The recruited ESR will pursue research work on antibacterial testing of polymers synthesized in the project. The major objective is the development, the design and the managing of technical documents for the validation of novel polymers and new antibacterial test on polymeric materials. Polymer sterilization and manufacturing, material surface characterization, bacteria selection and antibacterial testing methods will be studied.
The experimental work will be carried out at Politecnico (academic host) and at Universitätsklinikum Knappschaftskrankenhaus Bochum (Bochum, Germany- non academic partner)

Additional Information about HyMedPoly:

Infection has become one of the toughest problems in the medical world. As bacteria become more resistant to drugs, there are fewer effective antibiotics to fight against pathogens.

HyMedPoly aims to develop new therapies based on biomedical polymers and inorganic materials. 10 universities and companies from across Europe are creating a cohort of 15 European Industrial Doctorates to synthesis new biopolymers with added antibacterial functionality and develop functionalized bioactive ceramics and glasses that can act as active agents to kill bacteria, prevent their growth and biofilm formation.

The new material systems from HyMedPoly are aimed at applications such as wound care, implants and endoprostheses.

Important characteristics of the new European Industrial Doctorate programme are:

- you will be jointly supervised by academia and industry supervisors
- you are required to spend 50% of the time in your registered university in Italy and 50% time with the industrial research organisation and clinical partner Universitätsklinikum Knappschaftskrankenhaus Bochum (Bochum, Germany)

Requirements:

We seek a person with strong motivation and the ability to define his/her own research questions.
The applicant must hold:

- a master degree in Biomedical Engineering, Chemical engineering, Biology, Chemistry, Medicinal and Industrial Pharmaceutical Sciences or a related Master of Science degree. The applicant must have earned the degree prior to 31/07/2015
- Certificate of English language knowledge. Recognized certificates:
  - IELTS with a minimum score of 5.0;
  - TOEFL ibt with a minimum score of 77 - cbt with a minimum score of 210 - pbt with a minimum score of 547;
  - Cambridge ESOL examinations - General English exams: minimum level accepted is PET pass with merit;

Otherwise, a certificate stating that students have obtained Bachelor or Master degree, in which English was used as medium of instruction, certifying that “The medium of instruction is English”.
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Applicants shall, at the time of recruitment, be in the first four years (full-time equivalent research experience) of their research careers and not yet have been awarded a doctoral degree. Full-Time Equivalent Research Experience is measured from the date when a researcher obtained the degree which would formally entitle him/her to embark on a doctorate. In addition, at the time of recruitment, applicants must not have resided or carried out their main activity (work, studies, etc.) in Italy for more than 12 months in the 3 years immediately prior to the recruitment date. Compulsory national service and/or short stays such as holidays are not taken into account.

Personal Qualities:

- Excellent collaborative and teamwork skills
- Strong dedication and self-motivation
- Certificate of English language knowledge. Recognized certificates:

– IELTS with a minimum score of 5.0;

– TOEFL ibt with a minimum score of 77 - cbt with a minimum score of 210 - pbt with a minimum score of 547;

– Cambridge ESOL examinations - General English exams: minimum level accepted is PET pass with merit;

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We offer:

- Competitive salary in a 3 year full time position
- High working capacity
- An excellent training environment at the Politecnico di Torino AND Universitätsklinikum Knappschaftskrankenhaus Bochum (Bochum, Germany)

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The University Medical Center "Knappschaftskrankenhaus" Bochum GmbH, Germany (Medical partner and owned by the Knappschafts insurance Bahn & See), an affiliate of the University Hospital Ruhr-University Bochum (RUB), is a 485-bed healthcare facility. Each year around 22,000 patients receive hospital treatment. The Knappschaftskrankenhaus is a supraregional trauma centre Level I and additionally evaluated and certified as endoprostheses centre. Overall 9 disciplines are consolidated within this Centre and it contains 4 further special healthcare centres, e.g. epilepsy, oncology, stroke, and kidney and pancreas transplantation. Several clinical disciplines have research units and labs at the Centre of Clinical

Research at the Ruhr-University Bochum. The "Medical Biomaterials" research unit within this Centre is involved in this project.

Evaluation and Application:

Competences of applicants will be assessed on the basis of the evaluation of their educational and research background. The successful candidate should be familiar with polymer chemistry, surface engineering (including micro- and nanostructuring) and surface characterization. Additional Requirements: working experiences in cell biology techniques. CE Marking and Technical File development experience is a plus

The Application must include:

- Application letter detailing the reasons for applying
- CV (summarizing education, positions and academic work - scientific publications)
- A 1-page Personal Statement outlining your research interests, research experience, academic achievements and career ambitions.
- Copies of educational certificates and transcript of records
- Details of internationally recognized language qualifications achieved
- List of publications and academic work that the applicant wishes to be considered by the evaluation committee

