Zhuo HUANG

Translational medicine, bioengineering

I am a research doctor who foucus mainly on biomaterials and their applications in clinic. My major interest lies in hydrogel wound dressings and cardiovascular implant coatings.

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Core business

PHASE 1 Skill development

Sets his professional goals to be ambitious yet realistic.
Identifies and develops means to enhance his employability throughout his career; manages his professional development.
Broadens and upgrades his skillset, personal qualities and achievements.
Uses his networks to expand his scope of competence.
Knows how to transfer his expertise to other fields of activity.
Realizes the necessarily international dimension of his career path.
Accepts input from a mentor or coach to benefit his professional development.

PHASE 1 Evaluation

Evaluates the value of various documents concerning his field of expertise.
Is able to judge his own results in terms of both quality and added value.
Is willing to expose ideas to a critical audience; takes others' opinions of his work into account.
Is willing to evaluate the work of other contributors and provides reasoned, realistic judgments of others' work.

PHASE 1 Information management

Knows how to review the state of the art (SOTA) in a scientific topic.
Makes efficient use of information-gathering methods, identifies pertinent resources, particularly bibliographic resources.
Masters web-based research (e.g., bibliographic databases, patent databases)
Knows how to judge the pertinence of information, critique sources and check source reliability.
Designs and implements information-gathering and management systems using suitable technology.
Addresses issues relating to the security and life cycle of data.
Seeks out support from experts in information and data management.

PHASE 1 Expertise and methods

Masters the basic knowledge and key concepts of his field and knows their history and their significance.
Is familiar with recent progress in his field.
Can view his research activities within an international context.

Is familiar with the investigative methods and techniques of his field (including mathematics and statistics) and can explain why they are appropriate for a given purpose.
Is able to consider alternative methods and techniques.
Is able to formulate problems and hypotheses according to needs.
Defends his research findings in a constructive manner; provides evidence to support his ideas and proposals.
Organizes his presentations in a clear, informative and concise manner.

Personal and relational qualities

PHASE 1 Communication

Knows how to put together a persuasive presentation and communicate about his project or his activity.
Understands, interprets and communicates appropriately in a register suited to his aims and his audience.
Masters a range of communication tools.
Masters his online identity.
Contributes to the dissemination of knowledge within the company, and demonstrates effective teaching skills.
Is proficient in at least English and one other world language.

PHASE 1 Collaboration

Develops and maintains cooperative networks.
Knows how to build a professional network for his own and the company's benefit.
Is considered an authority in his field of expertise.
Is able to envisage his work in a partnership framework; evaluates the benefits and limitations of a partnership and identifies shared and conflicting interests.

PHASE 1 Analysis, synthesis and critical thinking

Analyzes his own findings and those of his peers.
Is able to synthesize; expresses key ideas clearly.
Can sort and rank information according to the goal.
Pursues his reasoning and hypotheses free of dogmatism or ideological bias.
Has the objectivity to consider various schools of thought; is able to modify his point of view.
Demonstrates intellectual rigor.

PHASE 1 Open-mindedness and creativity

Demonstrates an ability to acquire knowledge; shows flexibility and open-mindedness. Engages in interdisciplinary activities.
Possesses a constructive style of questioning and scientific doubt.
Develops, takes ownership of and tests new ideas; is clever; seizes opportunities.
Interacts with and seeks the collaboration of professionals of different cultures; knows how to accommodate cultural differences.

PHASE 1 Commitment

Recognizes and can clearly identify his sources of motivation.
Is able to sustain his commitment and motivation in the face of setbacks and adversity.
Deals efficiently with the routine aspects of his job.
Strives for excellence; shows determination.
Learns from his mistakes and bounces back from failures.
Relies on the support and assistance of his peers.

PHASE 2 **Integrity**

> During my PhD application, I received first the offer from INSERM and then from Institut Pasteur. The Pasteur offer was better in condition and in salaries, but I already gave oral commitment to INSERM a day before. Unfortunately, I could only choose one offer, either my own promise or better interest. I didn't sleep the whole night. The other day I wrote to the professor in Pasteur that I liked their offer very much but I couldn't break my promise. Although I faced many difficulties afterwards, I never regret my choice to honour my promise.

Builds staff awareness of the need for responsible conduct of research.
Advises his peers and staff concerning matters of respect, confidentiality, anonymity and intellectual property.

PHASE 2 **Balance**

Knows how to deal with strong opposition.
Draws on his strengths and transcends his weaknesses.
Knows how to cope with pressure generated by his career or his personal life.
Is able to keep his work and home environments separate.

PHASE 2 **Listening and empathy**

Knows how to engage in active listening in various situations.
Is careful to take his contacts' needs and frame of reference into account.
Expresses gratitude regularly.
Takes the needs of his staff into consideration, is sensitive to signs of stress and able to provide support and advice when needed.

PHASE 1 **Negotiation**

Is able to detect people's unstated needs based on the requests they formulate.
Knows how to reconcile the drivers, requirements and constraints of his contacts to reach a consensus, and is able to gather all the information needed to do so.

Business management and value creation

PHASE 1 **Project management**

Plans projects to meet goals in accordance with strategy and priorities, and taking quality, deadline and budget constraints into account.
Knows how to write specifications.
Is accountable for resources used and for meeting the deadlines and quality requirements of the deliverable.
Reacts efficiently and appropriately to change and unforeseen events.
Conducts his project within a framework of auditing and evaluation, deploying the appropriate systems.

PHASE 1 **Managing change**

Can adapt his approach and the project organization according to imperatives.
Adapts to changes and opportunities; knows how and where to find advice.

PHASE 1 **Managing risks**

Can determine the risks related to his project and the means for controlling them.
Is aware that technological and financial risks increase during the innovation process.
Understands the concept of corporate social responsibility.

PHASE 2 **Decision-making**

Realizes that no one solution is perfect; can reconcile the imperatives of the market with the quest for technical optimization.
Is able to make choices and assume the consequences of his decisions; has the ability to reconsider decisions when needed.

PHASE 1 **Obtaining and managing funding**

Manages his own funding and is comfortable in discussions with budget, financial and economic decision-makers.
Understands the funding process and knows how to determine the profitability of an activity.
Knows how to answer a request for proposals and/or write a grant application.

PHASE 1 **People management**

Has experience with teamwork; knows how to encourage, support and recognize the contributions of each player.
Knows how to be a team player.
Is able to win the trust of his peers and his line management.
Can report on his activities.
Supports his peers when needed and can provide assistance.
Understands human resources policies and management tools such as recruitment, evaluation, remuneration and strategic workforce planning.
Takes safety, social responsibility and labor law requirements into account.
Upholds rules on non-discrimination and equal opportunity among employees.

PHASE 1 **Producing results**

Knows how to transform ideas into innovations.
Quickly deploys prototype and test phases; involves internal and external customers in these phases.
Learns the lessons of the initial tests.
Understands the policies and processes involved in publishing and exploiting research outcomes in his entity.
Is able to determine the most appropriate means of exploiting his results (e.g., patent, publication).

PHASE 1 **Intellectual and industrial property**

Has basic knowledge of the rules of intellectual/industrial property and copyright as they apply to his own activities.
Understands the advantages and drawbacks of filing a patent.
Is aware of the importance of controlling the release of information.

PHASE 1 **Customer focus**

Is attentive to national and international markets; takes incoming and outgoing communication (suppliers, customers) into account.
Gathers information on the needs and expectations of internal and external customers.
Uses his technical expertise and familiarity with products to propose solutions tailored to customers.

Masters the basics of marketing.

Strategy and Leadership

PHASE 2 Strategy

In the beginning of my PhD thesis, I quickly found that the initial method in our plan is not secure enough after experiments and research. I had to deny my supervisor's idea and propose mine. So I did a lot of researching, and built two new strategies based on my knowledge of stat-of-art techniques and presented them to the whole team. I also informed them the pros and cons of the two strategies, and we all agreed on one of it. Now we are doing well in research progress following one of my strategies.

Observes his environment; recognizes discontinuities and micro-trends; detects weak signals.
Develops his own approach and shapes his understanding of the topic.
Encourages brainstorming and draws conclusions relevant to his area of activity.
Regularly produces documents of a forward-looking and strategic nature.
Makes sure that his activities contribute to the company's strategy and attainment of its objectives, and to the enrichment of his organization or sector of activity.
Is familiar with various innovation strategies.
Ensures that his staff is aware of and understands their environment and the importance of strategy.

PHASE 2 Leadership

In 2022, my former master supervisor was in severe health situation and I was forced to change my project to work in another team. I had to finish my new project in one year and a half with a publication with zero experience. I soon evaluated my situation and found a connection to a professor working in material science in my university. I asked for cooperation between my team and hers. I convinced my supervisor with our high chance to publish good articles working with her, which was his primary need. And for the professor, she lacked personnel to carry out project. She offered research idea and I carry it out, the results will be shared by both parties. The project finally led to one good publication and a patent.

Recognizes the need for and merits of collective effort; knows how to motivate and drive the entity he manages.
Is familiar with various leadership styles and adapts them to the specific project and the people on the team.
Is known within the company as a leader with the potential to promote ideas and initiatives and contribute effectively to their implementation.
Is able to impose his leadership in a competitive context.
Coordinates and mobilizes networks.
Encourages his staff to build a climate of trust.
Grooms his staff for future leadership roles.