A high-performing drug company, integrating all disciplines involved in the process of non-clinical drug development, including the transition to clinical development: **PreClinical Safety (PCS) Consultants Ltd**

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Dr. Stephanie Plassmann
Senior Expert in Non-Clinical Drug Development

In the last 20 years, the landscape of non-clinical development has changed dramatically, overall resulting in a loss of senior expertise in the pharmaceutical industry. On top of that, the biotechnology sector has developed very dynamically and many innovative products were invented, often by small and mid-size companies with a focus on research rather than development. However, the drain in non-clinical expertise also affects major pharmaceutical companies, since many of these players outsource operational activities rather than to hold resources and – therefore – expertise in-house. Taken collectively, the demand for senior expertise in the field of non-clinical drug development continues to increase. Sound non-clinical development links the operational aspects, which these days are mostly covered by Contract Research Organizations (CROs), with the underlying developmental strategy for a given pharmaceutical drug, both of which must be based on a sound scientific concept to be successful.

With that said, we're delighted to present PreClinical Safety (PCS) Consultants Ltd — the integrated drug development company (*www.pcsconsultants.com*). It provides independent expert advisory services, pharmacological and non-clinical safety evaluations to the pharmaceutical, agro-chemical, chemical, and food industries, to academic institutions engaged in science and research, to business investors and CROs.

Importantly, PCS offers the long-standing experience and expertise required to develop adequate non-clinical testing strategies to support the specific needs of clinical development for a drug in a given indication and to implement these operationally through testing programs ultimately building a comprehensive basis for a robust risk-benefit assessment

for human patients. The results generated through such a non-clinical development program and their integrated interpretation are the groundwork for adequate risk management and mitigation strategies to support clinical development.

PCS has gained experience in a wide range of test items used in drug development, including small molecules, herbals, biotechnology-derived products, and other materials such as food supplements, chemicals, and impurities.

The company was founded in 1989.

The Silicon Review contacted Dr. Stephanie Plassmann, who spoke about how the company is making a difference in this segment and plans to stay at the forefront. Below is an excerpt.

Head to Head with Dr. Stephanie Plassmann

What can you tell us about your expert advisory services and pharmacological and non-clinical safety evaluations?

At the outset, PCS focused on delivering consulting services in histopathology and toxicology. Since I took over in 2011, I developed the company further in the areas of drug metabolism and pharmacokinetics, non-clinical pharmacology, and quality assurance according to GLP (Good Laboratory Practice), and later to include even clinical pharmacology on a case-by-case basis. Therefore, today, PCS is recognized in the field as The Integrated Drug Development Company, integrating all disciplines involved in the process of non-clinical drug development, including the transition to clinical development. The integration of the results generated in the process of non-clinical drug development for a specific project must ultimately result in a robust risk-benefit assessment, which at the beginning of development forms the exclusive basis for first studies in humans, often in healthy volunteers. As the process continues, non-clinical and clinical development remain closely intertwined, because the only purpose of non-clinical development is to support the next step ahead in clinical development. PCS takes that responsibility and supports clients hands-on with their projects encompassing the non-clinical aspects of drug development from early to late stage development until approval, including taking over entire programs and acting as a virtual non-clinical safety department on behalf of our clients, as and when requested. We are multi-national and implement ICH-conform concepts. Our approaches are driven by strategic considerations which are implemented in a pragmatic process on a day-to-day basis. We are helping clients to robustly implement the process from the start including the selection of the right places, designing the studies, and working with the CROs to run the studies. We also offer to monitor these studies from a scientific and GLP perspective. Other typical non-clinical activities include providing expert opinions to address specific questions or issues, safety assessments, writing regulatory documentation such as Investigator Brochures or Briefing Books for regulatory interactions, CTD documents to support Investigational New Drug (IND) or New Drug Applications (NDAs) in the US or Marketing Authorization Applications (MAAs) in Europe. Last not least, PCS routinely participates in regulatory interactions including meetings to support discussions with authorities.

How responsive is PCS to the changing needs of its clients?

Because we strongly believe in involving the most senior experts, our team members work from different areas in the world (including Europe and USA). Not only does that allow us to expand our services on a need basis, but also we can interact with international clients and partners and benefit from time differences, which allows us to react proactively and in due course, as and when required. Worldwide, there is less and less senior expertise in the field available, because of the ongoing drain in this area while facing increasing demand.

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Our team is highly committed to helping patients suffering from diseases and conditions with a high unmet medical need including rare conditions (orphan diseases), which need to be addressed case-by-case. Long-standing experience is the basis for our sound understanding of how resources are most efficiently used for bringing drugs on the market in the shortest possible time while maintaining the highest quality standards. In non-clinical development, we must always be prepared to expect the unexpected, and emerging findings may have an immediate impact on human safety. It is an integral part of a sound process to react flexibly and responsibly to any challenge along the way.

No doubt PCS is charting new territories in this segment. Given how frequently circumstances change, what plans for transformation are you pursuing to remain relevant now and in the future?

We are actively involved in the scientific development of the field of non-clinical development, which continues to face emerging challenges. For example, during the pandemic, we contributed through regular workshops on vaccine development offered by the Association of Applied Human Pharmacology (*www.agah.eu*) to promote the understanding of vaccine development from a non-clinical perspective. I serve as a regent for the AGAH for many years. The AGAH also contributes to the development of guidance documents. I participated as a delegate on behalf of the AGAH as a senior expert in non-clinical development in the EMA-meeting for the revision of the European Guideline on Strategies to Identify and Mitigate Risks for First-In-Human and Early Clinical Trials with Investigational Medicinal Products, the revised version of which was implemented in February 2018 following the MAD trial incident with BIA 10-2474 in January 2016.

Is there anything else you want us to highlight that we might have missed?

Yes, I would like to add: Start your research by defining a target drug profile first i.e. think backward from the end of the process. Your non-clinical development cannot start without knowing the condition the clinicians intend to treat. The indication will define clinical, and therefore, non-clinical development. Non-clinical development is the bridge from bench to bedside – ca. seventy-five percent of new molecules in non-clinical development never reach clinical development, often because of untoward adverse effects which cannot be accepted for a given drug profile. However, sometimes, a certain level of adverse effects may be tolerated in another indication. It is of utmost importance to focus on the most promising drug candidates. Early consideration of non-clinical expertise for any research project helps to shape the development of a new drug according to the requirements of effective medical treatment, thereby streamlining the process and increasing the chances of success. We also advise seeking regulatory guidance early on through well-prepared scientific advice procedures and meetings. The highest scientific and quality standards are crucial and require a multifaceted approach, involving close and mutual interaction between all disciplines involved.

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About | Dr. Stephanie Plassmann

Dr. Stephanie Plassmann is a senior expert in non-clinical drug development and board-certified specialist in veterinary pharmacology and toxicology, and acts as an independent consultant for international companies and institutions since 2004. She holds expertise in pharmacology, non-clinical safety, and drug development, both from a strategic as well as a hands-on operational perspective comprising a broad spectrum of indications from early to late-stage development. She has been a part of the industry for nearly three decades and held positions in senior management for leading companies in the pharmaceutical industry. Dr. Stephanie Plassmann took over PCS (Basel, Switzerland), in 2011 and since she joined the company, her efforts have been dedicated to expanding the expertise of PCS. Today, the company comprises a dedicated team of senior experts each having more than 25 years of continuous hands-on experience and expertise in the field of preclinical drug development, including preclinical pharmacology, toxicology, toxicopathology, DMPK, and GLP.